COUNTY OF HUMBOLDT
PLANNING AND BUILDING DEPARTMENT
CURRENT PLANNING DIVISION

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Hearing Date: October 7, 2021

To: Humboldt County Planning Commission

From: John H. Ford, Director of Planning and Building Department

Subject: **Humboldt County Department of Public Works Coastal Development Permit**
Record Number PLN-2021-17402
Assessor's Parcel Numbers (APNs) n/a-State Highway 255 Right of Way
Manila area

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Please contact Trevor Estlow, Planner, at 268-3740, or by email at testlow@co.humboldt.ca.us, if you have any questions about the scheduled public hearing item.

AGENDA ITEM TRANSMITTAL

Hearing Date	Subject	Contact
October 7, 2021	Coastal Development Permit	Trevor Estlow

Project: A Coastal Development Permit application for Humboldt County Department of Public Works to develop a Class I bike path (also known as shared use path or multi-use trail) along the western side of the Highway 255 corridor in the Manila area. The project would start near the Pacific Avenue intersection (Post Mile 3.64) and terminate north of the Carlson Drive intersection (Post Mile 4.24) for a total length of 0.6 miles. The bike path is designed as a paved, 10-foot-wide surface with two, two-foot-wide shoulders offset variable distances from the edge of the highway shoulder. The project includes 150 feet of concrete sidewalk along Pacific Avenue, a crosswalk near the Pacific Avenue/Peninsula Drive intersection, two light standards near Pacific Avenue, crosswalks at Lupin Avenue and Carlson Drive, and on-site wetland creation. The purpose of the project is to improve safety for non-motorized and motorized travelers in Manila and increase the use of active modes of transportation. The project would enhance coastal access, heighten driver awareness of the community, and fill the gap for non-motorized travel between the Pacific Avenue and Lupin Avenue neighborhoods. The trail is needed because Highway 255 through Manila is an incomplete transportation facility that was designed primarily to support motorized vehicles.

Project Location: The project is located in the Manila area, on the west side of State Route 255 starting near the Dean Street/Pacific Avenue intersection and terminating just north of the Carlson Avenue intersection.

Present Plan Designations: Residential Low Density (RL); Caltrans road right of way. Slope Stability: Relatively Stable (0).

Present Zoning: Residential Single-Family with combining zones for Manufactured Homes, Archaeological Resource Area Outside of Shelter Cove and Beach and Dune Areas (RS-5-M/A,B); Caltrans road right of way.

Case Number: PLN-2021-17402

Assessor Parcel Numbers: n/a; Caltrans road right of way

Applicant	Owner(s)	Agent
Humboldt County Dept. of Public Works	Caltrans	GHD
Hank Seemann, Deputy-Director	Jen Buck	Andrea Hilton
1106 2nd Street	1655 Union Street	718 3rd Street
Eureka, Ca 95501	Eureka, CA 95501	Eureka, CA 95501

Environmental Review: Required

Major Issues: None

State Appeal Status: Project is appealable to the California Coastal Commission.

Humboldt County Department of Public Works
Coastal Development Permit
Record Number: PLN-2021-17402
Assessor's Parcel Numbers: State Route 255 Right of Way

Recommended Planning Commission Action

1. Describe the application as a public hearing
2. Request that staff present an overview of the project and staff's analysis.
3. Open the public hearing and receive testimony.
4. Close the public hearing and take the following action:

Adopt the Mitigated Negative Declaration and make all the required findings for approval of the Coastal Development Permit based on evidence in the staff report and public testimony, and adopt the Resolution approving the Humboldt County Department of Public Works project subject to the recommended conditions.

Executive Summary: The project is a Coastal Development Permit for the Manila Highway 255 Shared Path Project. The project is intended to provide non-motorized (primarily bike and pedestrian) transportation and recreational access in Manila via a Class I multi-use trail.

The shared use path project would provide a Class I bike path (trail) along the west side of State Route 255 (SR 255) beginning near the Dean Street/Pacific Avenue intersection (Post Mile 3.64) and terminating approximately 250 feet north of the Carlson Avenue intersection (Post Mile 4.24). The trail would provide a non-motorized alternative to SR 255, link neighborhoods and enhance access for users. The trail would be designed as a paved, 10-foot wide path with two, two-foot wide shoulders, situated at least five feet from the edge of a standard eight-foot wide shoulder along SR 255.

The project includes three interpretive signs with content that creates awareness of coastal dunes and native plants. The trail alignment would maximize separation from vehicular traffic to provide for the best user experience, and to accommodate highway operations and maintenance activities. Trail crosswalks would be provided at the Lupin Avenue and Carlson Avenue trail-road crossings.

The Project would complement pedestrian improvements recently completed by Humboldt County, Redwood Community Action Agency, and the Peninsula Community Collaborative on Peninsula Drive near Pacific Avenue. These improvements included widening the shoulder of Peninsula Drive between Pacific Avenue and the Manila Community Center/Redwood Coast Montessori School to create more separation between pedestrians and cyclists and vehicles. The improvements also included placement of a speed hump, crosswalk, and signage in front of the Manila Community Center/Redwood Coast Montessori School to improve safety to the existing bus stop on the opposite side of Peninsula Drive, as well as general pedestrian safety during roadway crossings. Project users would be able to access these pedestrian improvements along Peninsula Drive from the shared use pathway, enabling safer access along Peninsula Drive between Pacific Avenue and the Manila Community Center, including the dunes and beach commonly accessed from the Manila Community Center.

The current project is designed to accommodate future connection to the Humboldt Coastal Nature Center managed by Friends of the Dunes (FOD). The northern terminus of the trail project is adjacent to FOD property. FOD has a preliminary trail design but wants to wait for more time to ensure compatibility with the nearby private property. Caltrans has identified an administrative process that would allow a new opening in the right-of-way fence to allow this trail connection in

the event that FOD decides to pursue this connection in the future. This connection would enhance the usage of the current project and provide a tsunami evacuation route for the community.

The trail alignment was developed to avoid wetlands and sensitive habitats to the extent practicable. However, impacts to wetlands are unavoidable, and new wetlands will need to be created to offset these impacts. Coastal Act policy 30233 (a)(8) states:

> *"The diking, filling, or dredging of open coastal waters, wetlands, estuaries, and lakes shall be permitted in accordance with other applicable provisions of this division, where there is no feasible less environmentally damaging alternative, and where feasible mitigation measures have been provided to minimize adverse environmental effects, and shall be limited to the following: (8) Nature study, aquaculture, or similar resource-dependent activities."*

As wetlands can be filled for limited uses, this trail would fall under nature study and will facilitate bicyclists and pedestrians and provide interpretive signs at strategic locations. The project proposes to mitigate for 0.77 acres of permanent impacts to palustrine wetlands by creating 0.92 acres of wetlands on-site, thereby achieving a 1.2:1 replacement ratio. The created wetlands will be similar in extent and function to existing wetlands within the project area and subject to a long-term management plan for their protection consistent with the Caltrans' Maintenance Manual (July 2014). In addition to the on-site wetland creation, the County shall implement additional compensatory mitigation at a ratio of 4:1 by deducting a credit of 3.1 acres (i.e., 0.77 acres times four) from the existing mitigation bank associated with the off-site CDFW Fay Slough Wildlife Area. This will bring the total wetland mitigation ratio to 5.2:1.

Wetlands will be established in upland areas by recontouring ground surfaces to provide hydrologic connectivity to seasonal groundwater levels. Existing upland sites within proximity to groundwater are ideal for wetland creation Wetlands impacted by the project are typically seasonally wet (wet in winter and dry in summer). Thus, wetlands created to offset impacts will also be seasonal, with higher winter groundwater (closer to the surface) and drier summer conditions.

The ultimate regional goal is for separated non-motorized trails connecting Arcata, Manila, Samoa Bridge (route to Eureka), Samoa, and Fairhaven. The specific alignments for these trail connections have not been determined and will require future alignment option evaluation. The two existing transportation corridors (Highway 255 and NCRA railroad) will be the first consideration for potential alignments.

An Initial Study and Mitigated Negative Declaration for the project has been prepared and was submitted to the State Clearinghouse (SCH #2021080304). Based on the on-site inspection, a review of Planning Division reference sources, and comments from all responding referral agencies, Planning staff has found that the project will not result in a significant impact on the environment as proposed, and that the applicant has submitted evidence in support of making all of the required findings for approving the proposed subdivision per the Recommended Commission Action.

The ISMND includes a mitigation measure (AES-1) to minimize impacts to vegetative visual screening provided by vegetation within the Caltrans road right of way for adjacent homes on Locke Street adjacent to Highway 255 and to provide replanting where needed.

Based on the on-site inspection, a review of Planning Division reference sources, and comments from all involved referral agencies, Planning staff believes that the applicant has submitted evidence in support of making all the required findings for approving the Coastal Development Permit

Alternatives: A couple alternatives may be considered: 1) The Planning Commission could elect to add or delete conditions of approval; 2) The Planning Commission could deny approval of the requested permits if the applicant is unable to make all of the required findings. Planning Division staff is confident that the required findings can be made based on the submitted evidence and subject to the recommended conditions of approval. Consequently, planning staff does not recommend further consideration of these alternatives.

RESOLUTION OF THE PLANNING COMMISSION
OF THE COUNTY OF HUMBOLDT
Resolution Number 21-
Record Number PLN-2021-17402
Assessor Parcel Numbers: State Route 255 and County Road Right of Way

Resolution by the Planning Commission of the County of Humboldt certifying compliance with the California Environmental Quality Act and conditionally approving the Department of Public Works Coastal Development Permit (17402).

WHEREAS, Hank Seemann, Public Works Deputy-Director, submitted, on behalf of the Humboldt County Department of Public Works, an application and evidence in support of approving a Coastal Development Permit for the construction of the Manila State Route 255 Shared Route Pathway Project; and

WHEREAS, the Humboldt County Planning Department as the Lead Agency, prepared an Initial Study and Mitigated Negative Declaration in accordance with the California Environmental Quality Act (CEQA); and

WHEREAS, the Humboldt County Planning Commission held a duly noticed public hearing on **October 7, 2021**; reviewed, considered, and discussed the application for a Conditional Use Permit and Special Permit; and reviewed and considered all evidence and testimony presented at the hearing.

Now, THEREFORE BE IT RESOLVED, that the Planning Commission makes all the following findings:

1. FINDING: **Project Description:** A Coastal Development Permit application for Humboldt County Department of Public Works to develop a Class I bike path (also known as shared use path or multi-use trail) along the western side of the Highway 255 corridor in the Manila area. The project would start near the Pacific Avenue intersection (Post Mile 3.64) and terminate north of the Carlson Drive intersection (Post Mile 4.24) for a total length of 0.6 miles. The bike path is designed as a paved, 10-foot-wide surface with two, two-foot-wide shoulders offset variable distances from the edge of the highway shoulder. The project includes 150 feet of concrete sidewalk along Pacific Avenue, a crosswalk near the Pacific Avenue/Peninsula Drive intersection, two light standards near Pacific Avenue, crosswalks at Lupin Avenue and Carlson Drive, and on-site wetland creation. The purpose of the project is to improve safety for non-motorized and motorized travelers in Manila and increase the use of active modes of transportation. The project would enhance coastal access, heighten driver awareness of the community, and fill the gap for non-motorized travel between the Pacific Avenue and Lupin Avenue neighborhoods. The trail is needed because Highway 255 through Manila is an incomplete transportation facility that was designed primarily to support motorized vehicles.

EVIDENCE: a) Project File: PLN-2021-17402

2. FINDING: **CEQA:** The requirements of the California Environmental Quality Act have been met.

EVIDENCE: a) The Humboldt County Planning Department as the Lead Agency, prepared an Initial Study and Mitigated Negative Declaration in accordance with the California Environmental Quality Act (CEQA).

FINDINGS FOR COASTAL DEVELOPMENT PERMIT

3. FINDING: The proposed development is in conformance with the County General Plan, including the Humboldt Bay Area Plan.

EVIDENCE: a) The Manila State Route 255 Shared Route Pathway Project will be constructed within the existing Caltrans and County right of way. Coastal access facilities such as the proposed Pathway Project are principally permitted and require a Coastal Development Permit.

b) The project complies with the County's Housing Element as it will not add to nor subtract from the County Housing Inventory.

c) The project site is located in an area of relatively stable geologic instability and outside of any fire hazard severity zone. The project area is outside of any mapped Flood Zone according to FIRM Map #835. The project will implement Best Management Practices (BMPs) throughout construction to prevent erosion and the work is not expected to affect flood hazards. The property is located in the Local Responsibility Area (LRA) and is serviced by the Arcata Fire Protection District who responds to structural fires and medical emergencies. Based on these findings, the proposed development does not increase risks to hazards. All referral agencies have recommended approval of the proposed project.

d) A Natural Environment Study was prepared for the project by Stillwater Sciences (January 2019) that described the project, prior studies, the environmental setting, including biological conditions in the study area (BSA), biological resource impacts and mitigation, and regulatory determinations. The Study identified avoidance and minimization measures to be implemented to avoid and minimize potential impacts associated with development of the shared use pathway. Project activities will involve clearing and grubbing of vegetation within the footprint of the bike path, within paved or graveled areas, or in designated previously disturbed areas. Trail construction will involve excavation, fill to maintain trail grades, placement of aggregate base, asphaltic concrete paving for trail surface, and installation of appurtenances to include curbs, railings, lighting and signage. The project is designed to minimize impact on identified environmentally sensitive habitat areas (ESHA). No Upland ESHA will be impacted by the project. The project is being designed to avoid USACE and CCC jurisdictional waters and wetlands to the extent possible. According to the Wetland Delineation conducted by GHD, the trail alignment crosses through small wetland areas. As proposed, the project directly affects approximately 0.77 acres of wetlands by filling for nature study, and 0.92 acres of additional wetlands will be created at a ratio of 1.2:1 so there will be no wetland loss. In addition to the on-site wetland creation, the

County shall implement additional compensatory mitigation at a ratio of 4:1 by deducting a credit of 3.1 acres (i.e., 0.77 acres times four) from the existing mitigation bank associated with the off-site CDFW Fay Slough Wildlife Area. This will bring the total wetland mitigation ratio to 5.2:1. Nature study is allowed under PRC Section 30233 for wetland fill and 30240 for work in ESHA where the use is resource dependent and it can be shown that the project represents the least environmentally damaging feasible alternative, includes feasible mitigation measures to minimize adverse environmental effects, and does not degrade adjacent sensitive habitat areas.

e) The project is located in an area known to be highly sensitive with respect to cultural resources. The referral response from the Northwest Information Center (NWIC) recommended that a study be performed by a qualified professional archaeologist. At the request of the County Department of Public Works and Caltrans, Jamie Roscoe performed a cultural resource study (Sept. 2017) that covered the Area of Potential Effects (APE) associated with the project area. The study found no artifacts, features or historical resources within the project APE. Additionally, nearby sites were found to be outside the project APE. Furthermore, in consultation with the Bear River Band of the Rohnerville Rancheria, the Blue Lake Rancheria and the Wiyot Tribe, it was recommended that the standard inadvertent discovery condition be included in project approval. This has been added as a condition of approval.

f) The subject parcel is not located within a designated coastal view/scenic area.

4. FINDING: The proposed development is consistent with the purposes of the existing zone in which the site is located and the proposed development conforms to all applicable standards and requirements of these regulations.

EVIDENCE:

a) The project area encompasses lands within Caltrans and Humboldt County road right of way. The project will provide for public access facilities which are principally permitted.

b) The proposed development conforms to all development standards associated with the respective zones.

c) The property is within the Manufactured Home combining zone, however, no manufactured homes are associated with this project.

d) The property is within the Archaeological Resource Area Outside of Shelter Cove combining zone. A cultural resource study was prepared (Sept. 2017) that covered the Area of Potential Effects (APE) associated with the project area. The study found no artifacts, features or historical resources within the project APE. See additional discussion in 3.e above.

e) The property is within the Beach and Dune combining zone which ensures that any development permitted in coastal beach and dune areas will not detract from the area's natural resource value or their potential for providing recreational opportunity. The

project is consistent with this combining zone as it will provide recreational activities and not detract from the area's natural resource value.

5. FINDING: The proposed development and conditions under which it may be operated or maintained will not be detrimental to the public health, safety, or welfare; or materially injurious to property or improvements in the vicinity.

EVIDENCE: All reviewing referral agencies have approved the proposed development. No detrimental effects to public health, safety and welfare were identified. The proposed development is not expected be detrimental to property values in the vicinity nor pose any kind of public health hazard.

6. FINDING: The proposed development does not reduce the residential density for any parcel below that utilized by the Department of Housing and Community Development in determining compliance with housing element law.

EVIDENCE: a) The project in itself does not include any residential development, and will not reduce the residential density below that utilized by the Department of Housing and Community Development in determining compliance with housing element law.

SUPPLEMENTAL FINDINGS §312-39.14 Coastal Wetlands

7. FINDING: There is no less environmentally damaging feasible alternative; and the best mitigation measures feasible have been provided to minimize adverse environmental effects; and the required mitigation will maintain or enhance the functional capacity of the wetland or estuary.

a) The goal of the project is to provide safe pedestrian and bicycle access through Manila. The most logical location for the trail is within the existing Caltrans and Humboldt County road right of way. The project design avoids wetland impacts to the greatest extent feasible by designing the pathway on uplands (non-wetlands) where possible and reducing the construction footprint and trail prism where wetlands are present to the extent allowable by engineering standards. Side-slopes for the side opposite Highway 255 are designed steeper than typical in order to minimize wetland impacts. Design alternatives considered reduction of the pathway width, but would not meet project objectives as a narrower path would not meet the minimum design standard for a Class I bike path and accommodate the expected volume and diversity of users of the multi-use trail, including its potential use as a tsunami evacuation route. The option of an elevated boardwalk through delineated wetlands was considered but determined to be economically infeasible; this option would also create safety concerns by having a fixed object with extended length adjacent to Highway 255. Therefore,

considering all design options the chosen location and design for the Class I bike trail minimizes impacts and is the least environmentally damaging feasible alternative.

b) Wetlands will be established in upland areas by recontouring ground surfaces to provide hydrologic connectivity to seasonal groundwater levels. The trail alignment has been designed to minimize wetland impacts to the extent feasible while maintaining the functional use of the shared use path. Furthermore, avoidance and minimization measures have been incorporated into the project design to reduce potential impacts to wetlands. Other measures contained in the Natural Environment Study will be implemented to avoid and minimize construction impacts to northern red-legged frogs, including pre-construction surveys and restricting construction in standing water to the period between July 1 and October 30 so as to avoid disturbance during the breeding season, among other measures. Compliance with all avoidance and minimization measures included in the Mitigation, Monitoring and Reporting Program have been made a condition of project approval.

c) The mitigation will create on-site wetlands at a 1.2:1 replacement ratio. Therefore, there is no net loss of wetlands. In addition to the on-site wetland creation, the County shall implement additional compensatory mitigation at a ratio of 4:1 by deducting a credit of 3.1 acres (i.e., 0.77 acres times four) from the existing mitigation bank associated with the off-site CDFW Fay Slough Wildlife Area. This will bring the total wetland mitigation ratio to 5.2:1. A Habitat Mitigation and Monitoring Plan has been developed to achieve the dominant species composition in adjacent wetland habitats. Protection of created wetlands will be maintained through implementation of a long-range management plan consistent with the Caltrans' Maintenance Manual, with a commitment for no net wetland loss. Lastly, several invasive plant species were observed in the BSA in the developed landscape and nonnative perennial grassland habitats. The project will implement avoidance and minimization efforts to reduce the risk of spreading invasive plant species (e.g., purple pampas grass, fennel, European beach grass, yellow bush lupine) to adjacent natural communities, such as limiting ground disturbance and vegetation clearing, utilizing weed free materials and native seed mixes, and proper disposal of soil and vegetation. With implementation of all avoidance and minimization measures detailed in the plan, the project will have no effect on any state-or federally listed species, designated critical habitat, or essential fish habitat.

DECISION

NOW, THEREFORE, based on the above findings and evidence, the Humboldt County Planning Commission does hereby:

- Adopt the findings set forth in this resolution; and
- Adopts the Mitigated Negative Declaration and Mitigation, Monitoring and Reporting Program for the Humboldt County Department of Public Works Coastal Development Permit; and
- Conditionally approves the Humboldt County Department of Public Works Coastal Development Permit, based upon the Findings and Evidence and subject to the conditions of approval attached hereto as Attachment 1 and incorporated herein by reference.

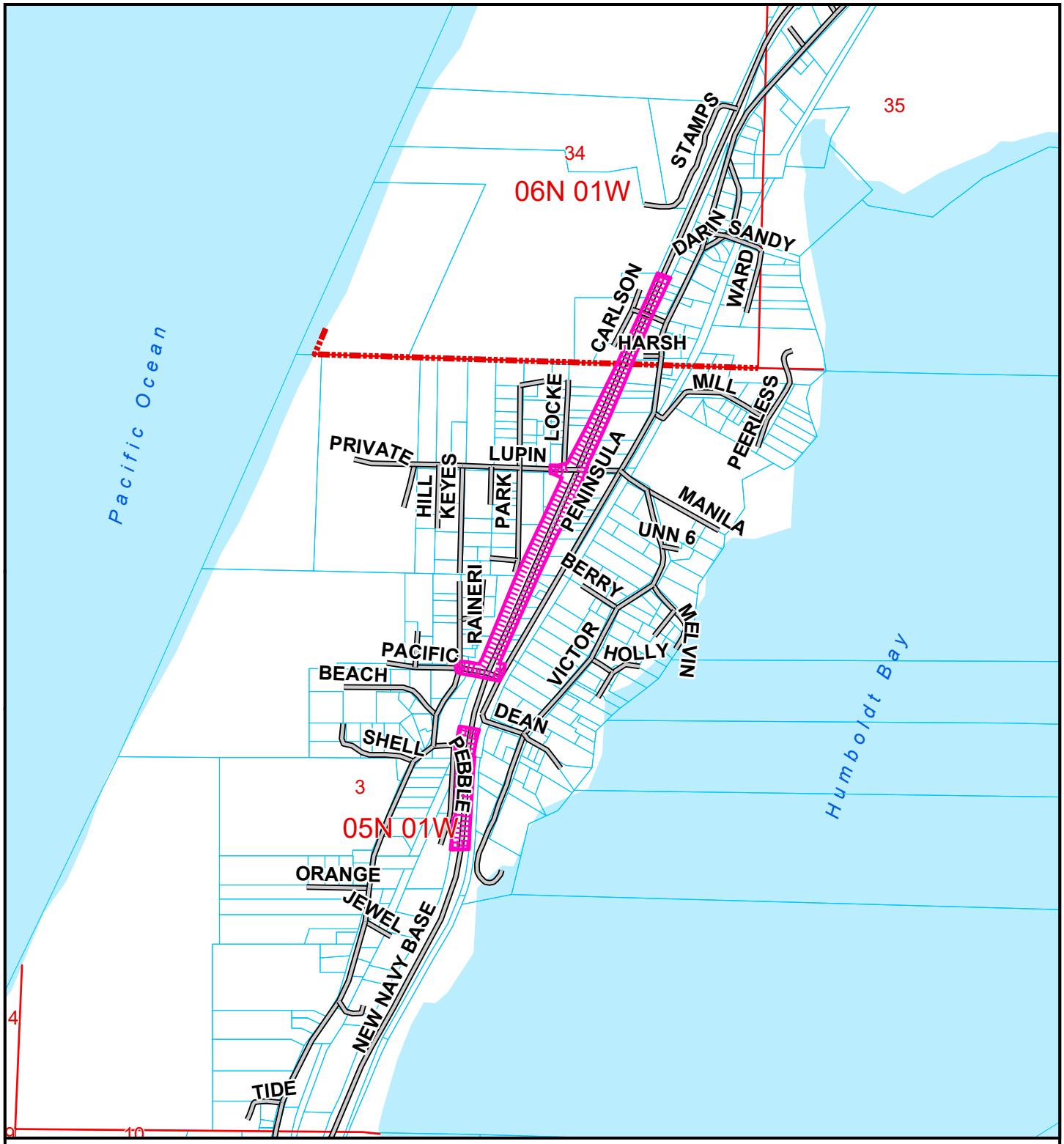
Adopted after review and consideration of all the evidence on **October 7, 2021.**

The motion was made by Commissioner ____ and seconded by Commissioner ___.

AYES: Commissioners:
NOES: Commissioners:
ABSTAIN: Commissioners:
ABSENT: Commissioners:
DECISION:

I, John Ford, Secretary to the Planning Commission of the County of Humboldt, do hereby certify the foregoing to be a true and correct record of the action taken on the above-entitled matter by said Commission at a meeting held on the date noted above.

_____
John Ford, Director
Planning and Building Department



LOCATION MAP

PROPOSED HUMBOLDT COUNTY DEPARTMENT OF PUBLIC WORKS COASTAL DEVELOPMENT PERMIT MANILA AREA PLN-2021-17402 STATE HWY 255 T06N R01W S34 & T05N R01W S03 HB&M (Eureka)

Project Area =

This map is intended for display purposes and should not be used for precise measurement or navigation. Data has not been completely checked for accuracy.

N

0 500 1,000 Feet

ATTACHMENT 1
CONDITIONS OF APPROVAL

Approval of the Coastal Development Permit is conditioned upon the following terms and requirements which must be fulfilled before the project is initiated.

1. Approval of this permit is based on the Project Description and the 90% Design Plans included in the Initial Study and Mitigated Negative Declaration *(August 2021)*. All related project activities shall be executed in accordance with these descriptions and discussion therein.

2. Applicant must apply for and obtain an encroachment permit from Caltrans prior to the initiation of any work within the Caltrans right of way.

3. All mitigation measures identified in the Initial Study and Mitigated Negative Declaration (August 2021) shall be implemented consistent with the Mitigation Monitoring and Reporting Plan. These shall be monitored by the Department of Public Works.

4. This project is required to pay for permit processing on a time and material basis as set forth in the schedule of fees and charges as adopted by ordinance of the Humboldt County Board of Supervisors. Any and all outstanding Planning fees to cover the processing of the permit shall be paid to the Humboldt County Planning Division, 3015 "H" Street, Eureka.

5. **Within five (5) days of the effective date of the approval of this permit,** the applicant shall submit a check to the Planning Division payable to the Humboldt County Recorder in the amount of $2,889.25. Pursuant to Section 711.4 of the Fish and Game Code, the amount includes the Department of Fish and Wildlife (CDFW) filing fee plus a $50 document handling fee.

On-going Requirements/Development Restrictions which Must be Satisfied for the Life of the Project:

1. The project shall be conducted in accordance with the project description and approved project site plan.

Informational Notes:

1. If cultural resources are encountered during construction activities, the contractor on site shall cease all work in the immediate area and within a 50-foot buffer of the discovery location. A qualified archaeologist as well as the appropriate Tribal Historic Preservation Officer(s) are to be contacted to evaluate the discovery and, in consultation with the applicant and lead agency, develop a treatment plan in any instance where significant impacts cannot be avoided.

   The Native American Heritage Commission (NAHC) can provide information regarding the appropriate Tribal point(s) of contact for a specific area; the NAHC can be reached at 916-653-4082. Prehistoric materials may include obsidian or chert flakes, tools, locally darkened midden soils, groundstone artifacts, shellfish or faunal remains, and human burials. If human remains are found, California Health and Safety Code 7050.5 requires that the County Coroner be contacted immediately at 707-445-7242. If the Coroner determines the remains to be Native American, the NAHC will then be contacted by the Coroner to determine appropriate

treatment of the remains pursuant to PRC 5097.98. Violators shall be prosecuted in accordance with PRC Section 5097.99.

The applicant is responsible for ensuring compliance with this condition.

2. The applicant is responsible for receiving all necessary permits and/or approvals from other state and local agencies.

3. The Coastal Development Permit shall expire and become null and void at the expiration of two(2) years after all appeal periods have lapsed (see "Effective Date"); except where construction under a valid building permit or use in reliance on the permit has commenced prior to such anniversary date. The period within which construction or use must be commenced may be extended as provided by Section 312-11.3 of the Humboldt County Code.

4. The applicant is required to pay for permit processing on a time and material basis as set forth in the schedule of fees and charges as adopted by ordinance of the Humboldt County Board of Supervisors. The Department will provide a bill to the applicant after the decision. Any and all outstanding Planning fees to cover the processing of the application to decision by the Hearing Officer shall be paid to the Humboldt County Planning Division, 3015 "H" Street, Eureka.

ATTACHMENT 2

APPLICANT'S EVIDENCE IN SUPPORT OF THE REQUIRED FINDINGS

Attachment 3 includes a listing of all written evidence which has been submitted by the applicant in support of making the required findings. The following materials are on file with the Planning Division:

- Application Form [in file]
- CalEEMod Modeling Information and Results [**attached** – see Appendix A of IS/MND]
- Natural Environment Study (Including Wetland Delineation) [**attached** – see Appendix B of IS/MND]
- CEQA Mitigation, Monitoring, and Reporting Program [**attached** – see Appendix C of IS/MND]
- 90% Design Plans [**attached** – see Appendix E of IS/MND]

Appendix A

Preliminary Wetland Delineation for the Manila Highway 255 Bike Path Project, Manila, California

REVISED FINAL REPORT ◦ NOVEMBER 2018

Preliminary Delineation of Waters and Wetlands for the Manila Highway 255 Bike Path Project, Manila, California – Revised

PREPARED FOR

GHD, Inc.
718 Third Street
Eureka, CA 95501

and

Humboldt County Department
of Public Works
1106 Second Street
Eureka, CA 95501

PREPARED BY

Stillwater Sciences
850 G Street, Suite K
Arcata, CA 95521

Suggested citation:
Stillwater Sciences. 2018. Preliminary Wetland Delineation for the Manila Highway 255 Bike Path Project, Manila, California. Revised Final Report. Prepared by Stillwater Sciences, Arcata, California for GHD, Eureka, California and Humboldt County Department of Public Works, Eureka, California.

Cover photos: Wetland delineation Survey Area, Manila, California, Stillwater Sciences 2017.

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Appendices

1 INTRODUCTION

1.1 Project Description and Proponent

The Manila Highway 255 Bike Path Project (Project) is a collaborative plan between Humboldt County, California Department of Transportation (Caltrans) District 1, and the Manila Community Services District to provide a bike path (also known as a shared-use path or multi-use trail) along the west side of State Route 255 (CA-255). The Project also includes intersection improvements along Pacific Avenue and Peninsula Drive and potential installation of streetlights at the Dean Street/Pacific Avenue intersection. The bike path will be designed in accordance with the Class I standard defined in Chapter 1000 of the Highway Design Manual (Caltrans 2016) and will consist of a paved, ten-foot-wide path with two-foot wide shoulders on either side that is situated at least five feet from the edge of the standard shoulder along the west side of CA-255. The project also includes the establishment of wetlands in onsite upland areas adjacent to the proposed bike path and in open space along SR 255 between Post Mile 3.45 and 3.58.

The Project is intended to improve safety for non-motorized and motorized travelers in Manila and facilitate the use of active modes of transportation by removing the existing gap in non-motorized travel pathways between the Pacific, Lupin, and Carlson neighborhoods. Additional benefits of the Project will include heightened driver awareness of the community, enhanced coastal access, and increased opportunities for recreation and nature study.

The Project proponent, Humboldt County Department of Public Works, may be contacted at:

Hank Seemann, Deputy-Director
Humboldt County Department of Public Works
1106 Second Street
Eureka, CA 95501
(707) 445-7741
HSeemann@co.humboldt.ca.us

1.2 Project Location and Survey Area

The Project is in unincorporated Humboldt County along CA-255 (a western alternate to U.S. Route 101 [US-101]), between the intersection with Dean Street/Pacific Avenue (Post Mile 3.64) and the intersection with Carlson Drive (Post Mile 4.14) in the community of Manila, California (Figure 1). The Project is in Section 34 of Township 6 North and Section 3 of Township 5 North, Range 1 West of the Eureka U.S. Geological Survey (USGS) 7.5-minute topographic quadrangle. The northern and southern boundaries of the Project are located at latitude 40°51'17.76"N and longitude 124°9'44.85"W and latitude 40°50'51.90"N and longitude 124° 9'58.56"W, respectively. The elevation within the Project area ranges from approximately 17 to 25 feet above mean sea level. The Project can be accessed from Eureka by taking the CA-255 exit from US-101, crossing the Samoa Bridge, and heading north along CA-255 for approximately 1.6 miles. From Arcata, the Project can be accessed by taking the CA-255 exit from US-101 and heading west towards Manila for 4.6 miles (Figure 1).

Wetland delineations were performed in a 5.5-acre area in 2017 (2017 Survey Area) and an additional 3.2-acre area in 2018 (2018 Survey Area). The additional 2018 Survey Area extends to the north and south of the 2017 Survey Area and was added to the Project in 2018 to incorporate

design modifications, a trail extension, and a potential wetland establishment area. Any reference to the 2017 Survey Area or 2018 Survey Area refers only to the area evaluated in that respective year. Otherwise, these two survey areas are combined and collectively referred to as Survey Area. The Survey Area parallels approximately 0.8 mile of CA-255 along its western side as well as a portion along the east side of CA-255 at the CA-255/Dean Street intersection (Figure 1). The Survey Area is in the CA-255 and Humboldt County right-of-way (ROW) which are actively managed by Caltrans and the County, respectively, in accordance with their standard road maintenance practices. As such, conditions in the Survey Area may change from those described in this report.

1.3 Purpose of the Wetland Delineation

The purpose of this delineation is to: (1) assess the geographic extent of water and wetland resources in the Survey Area; (2) delineate any waters of the U.S. that are potentially subject to the jurisdiction of the U.S. Army Corps of Engineers (USACE) under Section 404 of the Clean Water Act (CWA) and/or Section 10 of the Rivers and Harbors Act of 1899; (3) delineate any additional waters of the State that may be subject to the jurisdiction of the State Water Resources Control Board (SWRCB), California Coastal Commission (Coastal Commission or CCC), County of Humboldt Local Coastal Program (LCP)[1], and/or California Department of Fish and Wildlife (CDFW). The wetland features in the 2017 Survey Area were verified by the San Francisco Regulatory Branch of the USACE on March 7, 2018 (USACE 2018). The wetland features in the 2018 Survey Area are considered preliminary until verified by the San Francisco Regulatory Branch of the USACE. The USACE will need to determine CWA jurisdiction of the wetland features in the 2018 Survey Area based on current regulatory guidance (e.g., USEPA and USACE 2008).

[1] The Project is in the "appeal" jurisdiction of the Coastal Zone; this area falls under the County of Humboldt's LCP, with primary permitting jurisdiction with the county. Coastal Development Permits may be appealed to the CCC.

Figure 1. Project location and waters/wetland delineation Survey Area.

2 METHODS

2.1 Existing Conditions

Prior to the delineation, existing information on soils, hydrology, precipitation, and vegetation for the site was evaluated, and results from 2015 field reconnaissance surveys reported in the *Environmental Constraints Assessment* conducted for the Project (GHD, Inc. 2015) were reviewed. Information on potential jurisdictional waters and wetlands was obtained from the U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) online application, *Wetlands Mapper* (USFWS 2017, 2018). Available data from the U.S. Department of Agriculture Natural Resources Conservation Service (NRCS) Web Soil Survey website were reviewed for the Survey Area and nearby vicinity. Precipitation and climate records from the National Climatic Data Center (NCDC 2018) were reviewed for a nearby weather station, Eureka Weather Forecast Office, Woodley Island, California. Preliminary vegetation maps from the 2017/2018 vegetation mapping and characterization surveys associated with the Project's *Natural Environmental Study* (NES) (Stillwater Sciences 2018) were reviewed.

2.2 Field Delineation

Delineations of potential jurisdictional waters and wetlands were conducted by qualified personnel on August 1–2, 2017 (within the 2017 Survey Area) and October 17–18, 2018 (within the 2018 Survey Area) in accordance with the *Corps of Engineers Wetlands Delineation Manual* (1987 Manual, USACE 1987), *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0)* (WMVC Supplement; USACE 2010), USACE *Regulatory Guidance Letter (RGL) No. 05-05* (USACE 2005), and *A Guide to Ordinary High Water Mark (OHWM) Delineation for Non-Perennial Streams in the Western Mountains, Valleys, and Coast Region of the United States* (OHWM Guide; Mersel and Lichvar 2014). The delineations included any feature that could potentially meet the definition of a water protected under the Clean Water Act (and thus be subject to USACE jurisdiction), the Porter Cologne Act (RWQCB jurisdiction), and the Coastal Act or Humboldt County LCP (collectively, CCC/LCP jurisdiction).

2.2.1 Waters determination

The extent of waters, other waters, and tributaries was delineated by the location of the OHWM. The OHWM is defined as the elevation established on the shore by water fluctuations, and is indicated by physical characteristics such as: (a) a clear, natural line impressed on the bank; (b) shelving; (c) changes in the character of soil; (d) destruction of terrestrial vegetation; (e) the presence of litter and debris; or (f) other appropriate means that consider the characteristics of the surrounding areas. The OHWM was identified in accordance with the USACE RGL 05-05 (USACE 2005) and the OHWM Guide (Mersel and Lichvar 2014).

Prior to the wetland delineation surveys, aerial photographs and topographic maps were reviewed to identify limits and connections of potential wetlands to traditional navigable waters (TNW) such as the Humboldt Bay. During the wetland delineations, waters in the Survey Area were further reviewed for their connectivity to a TNW based on culvert connections and the existing drainage network. The OHWM of potentially jurisdictional waters was delineated in the field. Boundaries were mapped via a sub-meter Global Positioning System (GPS) unit (Trimble Geo 6000) and later post-processed, corrected, and incorporated into Geographic Information Systems (GIS) where maps detailing the delineation results were generated. The delineation team recorded

the width of the channel at the OHWM at representative cross-sections, and the OHWM water depth at the thalweg (i.e., the projected depth of water when the channel is filled to the OHWM) onto USACE OHWM delineation data forms.

2.2.2 Wetland determination

Wetlands were delineated in accordance with the1987 Manual (USACE 1987) and WMVC Supplement (USACE 2010). The 1987 Manual and WMVC Supplement provide technical guidelines and methods for the three-parameter approach to determining the location and boundaries of USACE jurisdictional wetlands. This approach requires that an area must support positive indicators of hydrophytic vegetation, hydric soils, and wetland hydrology to be considered a jurisdictional wetland. Connectivity of delineated wetlands to other waters and tributaries was evaluated in accordance with USACE RGL 07-01 (USACE 2007). As the Survey Area is located within the Coastal Zone, all wetland features were also evaluated for potential CCC/LCP jurisdiction which requires that only one or two of the three USACE wetland parameters (hydrophytic vegetation, hydric soils, and wetland hydrology) be present (1976 California Coastal Act, Public Resources Code Section 30000 *et seq*.).

A total of 17 data points were sampled in potential USACE- and CCC/LCP-jurisdictional wetlands in the Survey Area. If a data point met all three wetland parameters, it was considered a USACE wetland; if a point only met one or two wetland parameters, it was considered a CCC/LCP wetland; if a point met no wetland parameters, it was considered upland. Potential wetland areas were identified based on information generated from the pre-field review (e.g., the NWI *Wetland Mapper* results), the vegetation maps of the Survey Area (Stillwater Sciences 2018, GHD, Inc. 2015), and observations of hydrology and vegetation in the field. If a data point met all three parameters for a USACE jurisdictional wetland, then a paired data point was placed along the preliminary transition zone (the area in which a change from wetland to non-wetland conditions occurs) to determine the wetland/upland boundary. If the data point did not meet any of the three parameters, then the point was considered to be in an upland location and a paired point was not collected. At each data point, a soil pit was dug and the following information was recorded using the USACE (2010) data forms:

1. **Vegetation**: Dominant plant species for each stratum (i.e., tree, sapling/shrub, herb, woody vine) by scientific name (genus and species) following the taxonomy of *The Jepson Manual, Second Edition* (Baldwin et al. 2012) and the online *Jepson eFlora* (Jepson Flora Project 2018). Absolute percent cover and dominance were determined using the 50/20 rule outlined in the *WMVC Supplement*, and the wetland indicator status (OBL [obligate], FACW [facultative-wet], FAC [facultative], FACU [facultative-upland], and UPL [upland]) defined for the WMVC Region in the *National Wetland Plant List: 2016 Wetland Ratings* (Lichvar et al. 2016). Plant species not listed in the *2016 National Wetland Plant List* were considered upland (UPL) species. A dominance test was performed to determine if the data point exhibited hydrophytic vegetation. If the dominance test was not conclusive and wetland hydrology and hydric soils were present, then the prevalence index was calculated.
2. **Hydrology**: Presence and depth of surface water, groundwater, and/or soil saturation were recorded. In addition, if primary (e.g., oxidized rhizospheres along living roots) and secondary indicators (e.g., drainage patterns, dry-season water table, saturation visible on aerial imagery) were observed, then they were also recorded at each data point.
3. **Soils**: Moistened soil matrix descriptions were recorded for each data point using the following: depth of the sample, color (as defined in Munsell soil color charts [Munsell Color 2000]), and texture. If present, redox features were then described by type (e.g.,

concentration, depletion, reduced matrix) and location (e.g., pore lining, root channel, or matrix). Hydric soils were determined using the *WMVC Supplement* primary indicators, such as sandy redox (S5). In addition, mapped soil units (described in Section 3.1.2) were considered and the current National List of Hydric Soils (NRCS 2017, 2018a) was consulted.

The location of each data point was recorded and photographs were taken of the representative site characteristics (Appendix A). Coordinates were determined using a Trimble Geo 6000 GPS unit. The wetland boundaries were walked and locations along the perimeter were recorded using the GPS unit. These boundaries along with other GPS collected data were post-processed, corrected, and incorporated into GIS where maps detailing the delineation results were generated. Mapped wetlands were classified according to the *Classification of Wetlands and Deepwater Habitats of the United States* (Cowardin et al. 1979, Federal Geographic Data Committee [FCDC] 2013) based on the vegetation composition and structure at the data points.

3 RESULTS

3.1 Existing Conditions

3.1.1 Hydrology

The Project is located along the North Spit of Humboldt Bay on the Samoa Peninsula and is bounded by Humboldt Bay to the east and the Pacific Ocean to the west (Figure 1). The Project is located within the Eureka Plain Hydrologic Unit and the Eureka Plain Groundwater Basin. This basin includes two primary water-bearing formations, the Pliocene Hookton Formation and the Holocene Dune Sand, the former of which includes the Survey Area (CDWR 2004). These dune sands form an aquifer, a freshwater lens that overlies the ocean water (Evenson 1959), which is recharged almost wholly from local precipitation (Fuller 1975).

A network of intermittently flowing drainage ditches border CA-255 in the Survey Area. These drainages connect via culverts to convey water at least seasonally into non-navigable tributaries to Humboldt Bay (a TNW) and their adjacent wetlands. Humboldt Bay includes the Port of Humboldt Bay, a protected deep water port with harbor facilities designed to serve cargo and other vessels, and a number of marinas that serve hundreds of small to mid-size boats and pleasure crafts (Humboldt Bay Harbor, Recreation, and Conservation District 2018). Commercial oyster production operations that produce more than half of all oysters farmed in California are located in Humboldt Bay (Pomeroy et al. 2010).

The NWI *Wetlands Mapper* shows palustrine scrub-shrub wetlands located throughout the Survey Area (Figure 2).

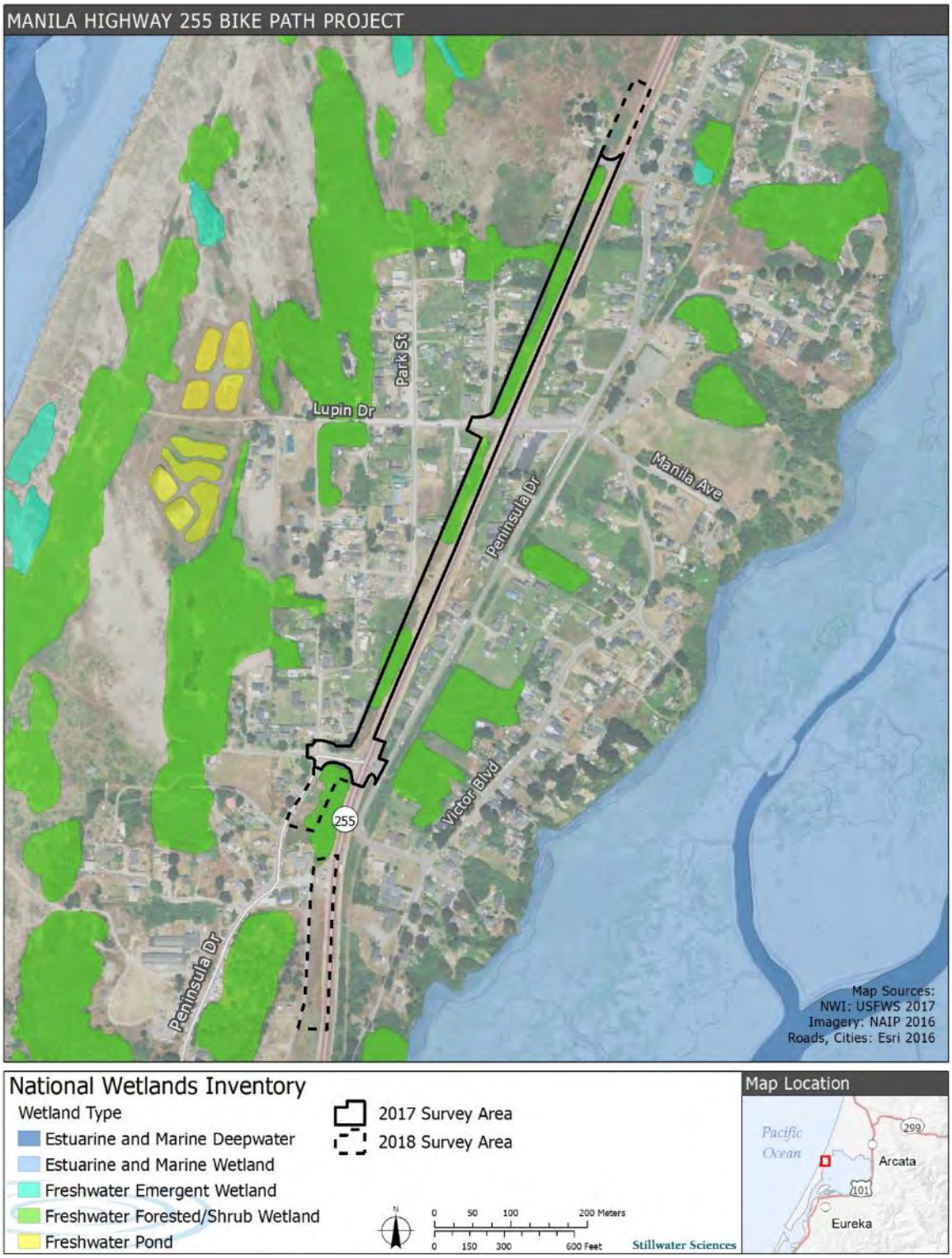


Figure 2. National Wetlands Inventory map of the Survey Area (Source: USFWS 2017).

3.1.2 Soil units

Soil units in the Survey Area was primarily mapped as Urban land-Anthraltic Xerorthents association, 0 to 2% slopes, with a small portion of the 2018 Survey Area mapped as Samoa-Clambeach complex, 0 to 50% slopes (NRCS 2018b, Figure 3).An additional soil map unit, Lanphere (2 to 75% slopes), was also assessed due to its proximity to the Survey Area.

Urban land-Anthraltic Xerorthents association (0 to 2% slopes) is comprised of 80% urban land, industrial and 20% anthralitic xerorthents and similar soils. This association is found from 0 to 10 feet above mean sea level with a mean annual precipitation of 41–43 inches, a mean annual air temperature of 50–55ºF, and a frost-free period of 275–330 days (NRCS 2018b). Anthraltic Xerorthents is located on backslopes of fluviomarine terraces with a parent material of coarse-loamy fluviomarine deposit or coarse-loamy dredge spoils. A typical profile consists of gravelly loamy fine sand within the upper 0–6 inches with sandy loam, gravelly sand, and sand forming the horizons below. It has a drainage class of moderately well drained (NRCS 2018b).

Samoa-Clambeach complex (0 to 50% slopes) is typically comprised of 65% Samoa series, 30% Clambeach series, and 5% minor components. The complex is found in areas with elevations that range from 0 to 70 feet above mean sea level and with a mean annual precipitation of 35–80 inches, a mean annual air temperature of 50–55º F, and a frost-free period of 275–330 days (NRCS 2018b). The Samoa series is primarily located along the shoulder, backslope, and summit of dunes. A typical profile consists of slightly decomposed plant material in the upper 0–1 inches (Oi horizon) with sand forming all other horizons below. It has a drainage class of somewhat excessively drained. Samoa soils have a udic moisture regime which may develop redoximorphic features from brief and localized saturated conditions around root channels during the winter months, rather than from the presence of free water throughout the soil profile (NRCS 2016a). The Clambeach series is associated with deflation basins along toe slopes and is very poorly drained. Clambeach soils have an aquic moisture regime with endosaturation typically characterized by a water table depth ranging from 0–4 inches January–March to greater than 72 inches June–November and depth to redoximorphic features of 0–4 inches (NRCS 2016b). This series has a soil profile comprised entirely of sand in all horizons and is listed as a hydric soil in the region (NRCS 2017, 2018b).

The Lanphere (2 to 75% slopes) map unit is located in areas with elevations that range from 0 to 80 feet elevation above mean sea level, mean annual precipitation of 35–80 inches, mean annual air temperature of 50–55º F, and a frost-free period of 275–330 days (NRCS 2018b). The Lanphere series are positioned in the summit, backslope, and shoulder of dune and longitudinal dune landforms. The typical profile includes an organic horizon from 0–4 inches and A, AC, and C horizons from 4–63 inches comprised of sand. It has a depth to water table of more than 80 inches with a natural drainage class of somewhat excessively drained (NRCS 2018b). Lanphere soils have a udic moisture regime which may develop redoximorphic features from brief and localized saturated conditions around root channels during the winter months, rather than from the presence of free water throughout the soil profile (NRCS 2016c). Minor components of this map unit include the Clambeach (10%) and Samoa (5%) soil series (NRCS 2018b).

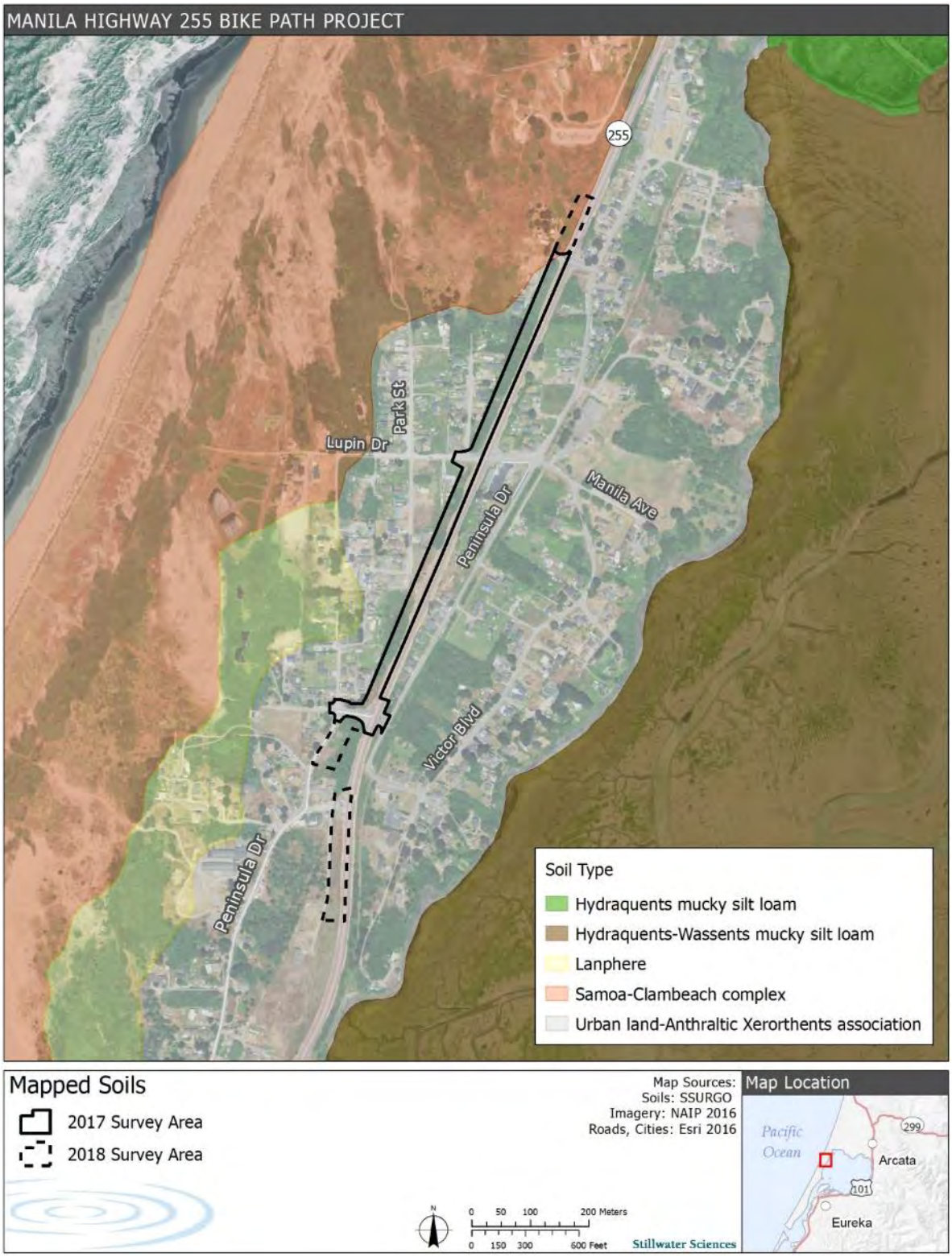


Figure 3. Mapped soil units in the Survey Area.

Wetland data points closely resembled the hydric soil Clambeach series (NRCS 2017) with matrix colors ranging from 10YR (value of 2–3 and chroma of 1–2) and 2.5Y (value of 3 and chroma of 1–2) (Appendix B). Data points commonly contained sandy clay loam (near and within drainage ditches), sandy loam, and sand. Soil samples were considered hydric when a positive primary indicator, such as sandy redox (S5) was identified (data points 1W, 2Wa–2We, 3W, 4W, and 101W in Appendix B).

3.1.3 Precipitation

Local climate conditions are moist, cool, and influenced by the conditions of the Pacific Ocean, with wet cool winters and cool summers with frequent fog and strong winds. Rainfall occurs primarily between October through April, with an average annual rainfall of 40 inches (NCDC 2018). The average monthly temperature range is approximately 41–56ºF in winter and approximately 52–63ºF in the summer (NCDC 2018).

The Eureka, California National Oceanic and Atmospheric Administration (NOAA) weather station recorded less than one inch (0.66 inches) of precipitation (rain) in the two months preceding the 2017 field survey. Total precipitation in June 2017 was 0.59 inches and in July 2017 was 0.07 inch; most of accumulated rain (0.37 inch) occurred on June 7, 2017. According to the weather station, the average precipitation in June and July (based on the monthly normals for the 1981–2010 period of record) is 0.75 inches and 0.18 inches, respectively (NCDC 2018). Although June–July 2017 had slightly dryer conditions than normal, monthly precipitation totals for January–May 2017 (totaling 35.04 inches) exceeded the weather stations monthly precipitation normals by 14.3 inches (normal precipitation for January–May is 20.75 inches) resulting in a higher than normal winter and spring water table for the region. Weather conditions during the 2017 delineation were sunny and clear, 65–67ºF, and warmer than the weather station's average temperature for the period of record of 58.5º F for the month of August (NCDC 2018).

The only substantial rainfall reported at the Eureka, California NOAA weather station in the two months preceding the 2018 field delineation occurred during 29 September–9 October, which totaled 0.52 inches. When compared to the accumulated average precipitation of 2.83 inches for September and October (using monthly normals for the 1981–2010 period of record), the 2018 delineation occurred during a dryer than normal period for the region (NCDC 2018). Weather conditions during the 2018 delineation were sunny with some fog and wind throughout the day with temperature highs of 54–55ºF, which was normal based on the weather station's average temperature for the month of October (54.4ºF) (NCDC 2018). However, the slightly drier conditions prior to the field surveys is unlikely to have influenced the delineation results; water and wetland features were evident regardless of precipitation.

3.1.4 Vegetation communities

Results from the vegetation mapping and habitat characterization surveys conducted by Stillwater Sciences prior to or concurrent with the wetland delineation surveys in 2017/2018 were reviewed to assess the presence of dominant hydrophytic vegetation, as well as, to assist with classification of wetland types during the wetland delineation. Vegetation alliances mapped in the Survey Area include:

- *Rubus ursinus* Shrubland Alliance (coastal brambles),
- *Salix hookeriana* Shrubland Alliance (coastal dune willow thickets),
- *Abronia latifolia - Ambrosia chamissonis* Herbaceous Alliance (dune mat),

- *Ammophila arenaria* Semi-Natural Alliance (European beach grass swards),
- *Anthoxanthum odoratum* Semi-Natural Alliance (sweet vernal grass meadows),
- *Carex obnupta* Herbaceous Alliance (slough sedge swards),
- *Juncus breweri* Herbaceous Alliance (salt rush swales),
- *Oenanthe sarmentosa* Herbaceous Alliance (water parsley marsh),
- *Scirpus microcarpus* Herbaceous Alliance (small-fruited bulrush marsh), and
- developed/landscaped.

Vegetation communities are described in further detail in Section 3.4.1 of the NES and the vegetation map of the Survey Area is provided in Appendix C (Figures C-2–C-5) of the NES (Stillwater Sciences 2018).

3.2 Preliminary Jurisdictional Waters and Wetlands

The Survey Area contains 0.13 acres of potentially USACE-jurisdictional waters and 2.57 acres of potentially USACE-jurisdictional wetlands adjacent to these waters (Table 1, Figures 4–5, Appendices A and B). These potentially jurisdictional waters of the U.S. are also considered to be waters of the State under SWRCB, CDFW, and CCC/LCP jurisdiction. Additionally, there is a total of 0.20 acre of wetlands that are only subject to CCC/LCP jurisdiction (Table 1, Figure 6, Appendices A and B).

Table 1. Preliminary USACE-jurisdictional waters of the U.S., including wetlands, and CCC/LCP-jurisdictional wetlands in the Survey Area.

Description	Acreage
Waters[1]	
Intermittently flowing drainage ditches (W-1, W-2, and W-3)	0.13
Wetlands[1]	
Seasonally flooded palustrine persistent emergent wetlands	0.33
Seasonally flooded palustrine broad-leaved deciduous scrub-shrub wetlands	2.24
Additional Coastal Commission Wetlands[2]	
One parameter wetlands within the Coastal Zone	0.20

[1] Subject to Section 404 of the CWA, and SWRCB, CDFW, and CCC/LCP jurisdiction.
[2] Subject to CCC/LCP jurisdiction.

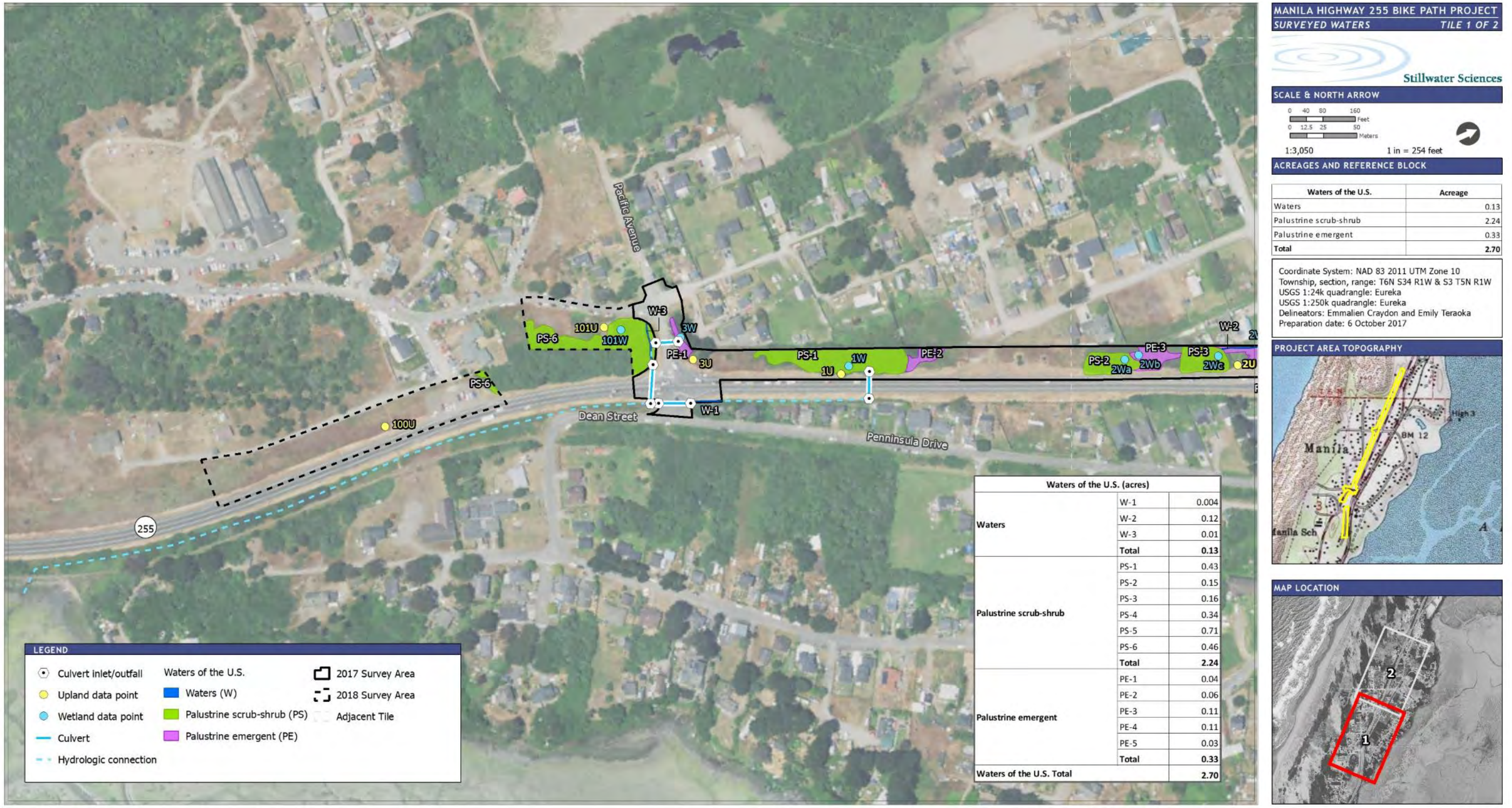
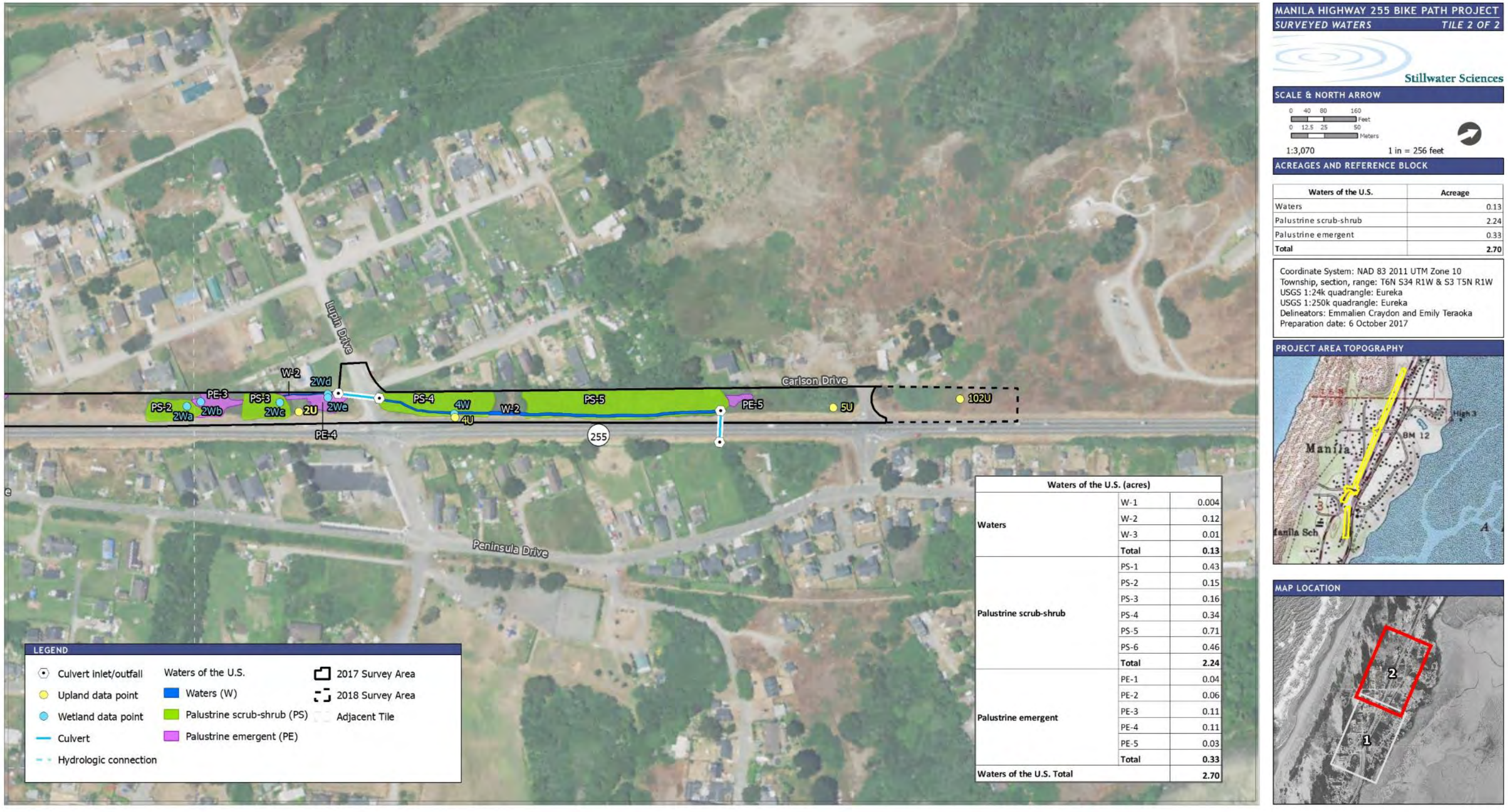


Figure 4. Preliminary waters of the U.S. in the Survey Area.



MANILA HIGHWAY 255 BIKE PATH PROJECT

SURVEYED WATERS *TILE 2 OF 2*

Stillwater Sciences

SCALE & NORTH ARROW

0 40 80 160 Feet
0 12.5 25 50 Meters

1:3,070 1 in = 256 feet

ACREAGES AND REFERENCE BLOCK

Waters of the U.S.	Acreage
Waters	0.13
Palustrine scrub-shrub	2.24
Palustrine emergent	0.33
Total	**2.70**

Coordinate System: NAD 83 2011 UTM Zone 10
Township, section, range: T6N S34 R1W & S3 T5N R1W
USGS 1:24k quadrangle: Eureka
USGS 1:250k quadrangle: Eureka
Delineators: Emmalien Craydon and Emily Teraoka
Preparation date: 6 October 2017

PROJECT AREA TOPOGRAPHY

MAP LOCATION

Waters of the U.S. (acres)		
Waters	W-1	0.004
	W-2	0.12
	W-3	0.01
	Total	**0.13**
Palustrine scrub-shrub	PS-1	0.43
	PS-2	0.15
	PS-3	0.16
	PS-4	0.34
	PS-5	0.71
	PS-6	0.46
	Total	**2.24**
Palustrine emergent	PE-1	0.04
	PE-2	0.06
	PE-3	0.11
	PE-4	0.11
	PE-5	0.03
	Total	**0.33**
Waters of the U.S. Total		**2.70**

Figure 5. Preliminary waters of the U.S. in the Survey Area.

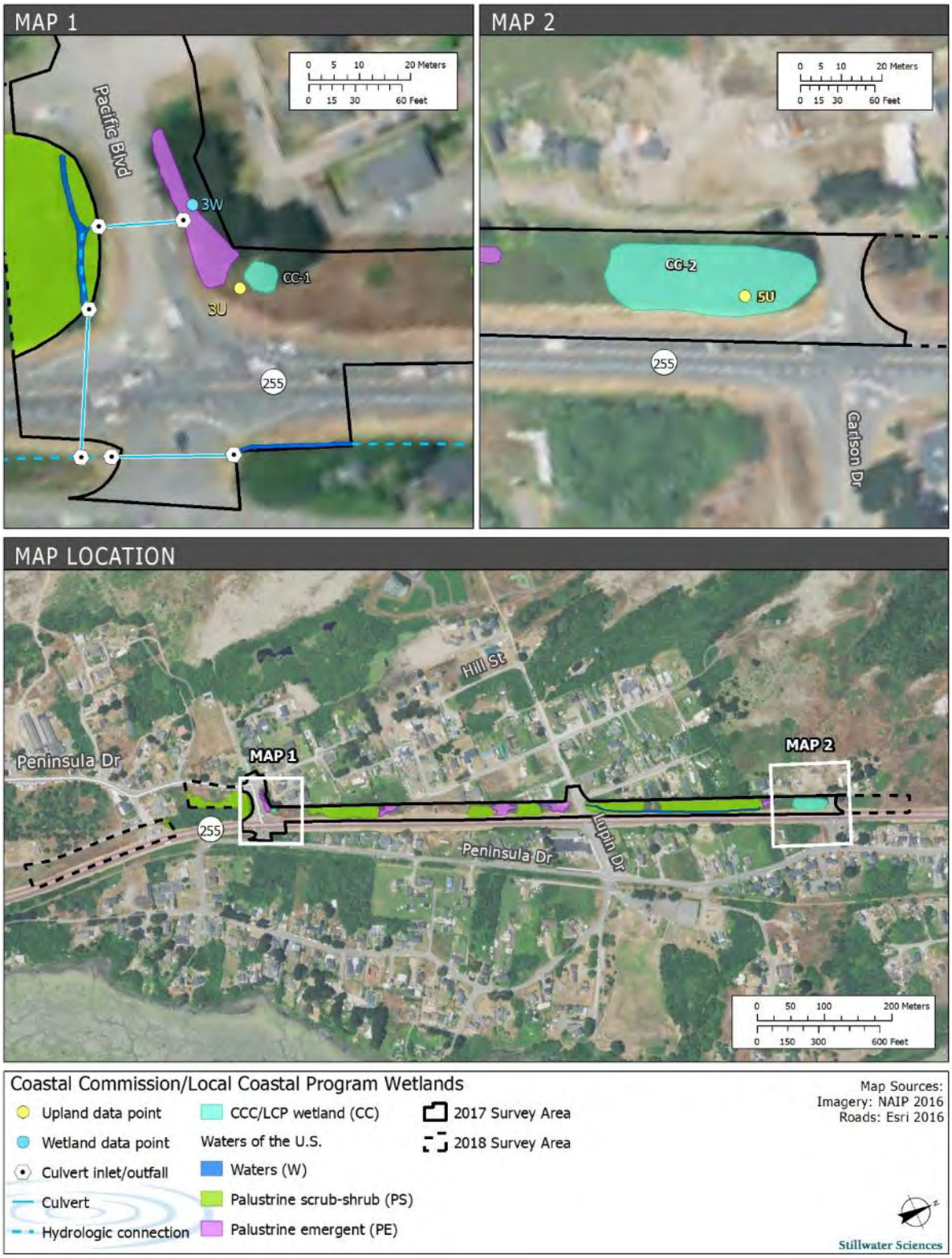


Figure 6. Additional potential CCC/LCP-jurisdictional wetlands the Survey Area.

3.2.1 Waters

There are 0.13 acres of potential USACE-jurisdictional waters in the Survey Area. These include three nontidal relatively permanent waters (e.g., intermittently flowing drainage ditches) with a clear OHWM that at least seasonally convey surface water into non-navigable tributaries to Humboldt Bay (a TNW) and their adjacent wetlands (Table 1, features W-1–W-3 in Figures 4, 5, and 7). Six associated culvert crossings also were identified along CA-255 in the Survey Area which indicate conveyance and seasonal surface water connection to nearby wetland features that drain into Humboldt Bay to the east and south of the Survey Area (Figure 7). A seventh culvert crossing was identified in the 2018 Survey Area however, it was not associated with a drainage ditch or wetland feature (Figure 7). Based on the absence of wetland indicators at data point 100U (Appendices A and B), any surface water collection at this location is brief and temporary; stormwater drains through the culvert to the drainage ditch on the east side of CA-255.

Based on the NWI Wetlands Mapper and historical aerial photographs (Shuster 1947), the current drainage ditches were formerly part of a large wetland complex that existed prior to the construction of CA-255 and development of the community of Manila. These drainage ditches are assumed to have been excavated during the development of the highway. All constructed drainage ditches (W-1–W-3) had variable vegetative cover, ranging from bare ground with some overhead shrub and tree canopy to high cover by herbaceous hydrophytic vegetation. When the latter was observed, vegetation differed in composition and cover from upland regions and this transition in vegetation identified the OHWM. As the delineations were conducted during the dry season, surface water in the intermittently flowing drainage ditches was low (i.e., less than 4 inches deep) to absent. Thus, the vegetation encroachment (a common attribute in non-perennial waters of the WMVC region [Mersel and Lichvar 2014]) observed in the ditches, is anticipated to decrease in cover with increased surface water levels during the wet season.

To characterize waters, measurements were taken across six transects (Appendix B). The primary OHWM indicators at the transects included a break in slope and changes in vegetation. Waters ranged in width from 3 to 8 feet (based on the horizontal distance between the OHWM on the right and left banks, respectively) and ranged in depth from 10 to 32 inches (based on the vertical distance between the OHWM and channel thalweg). Surface water was observed at a few transect locations and ranged from 1 to 4 inches deep (Appendix B).

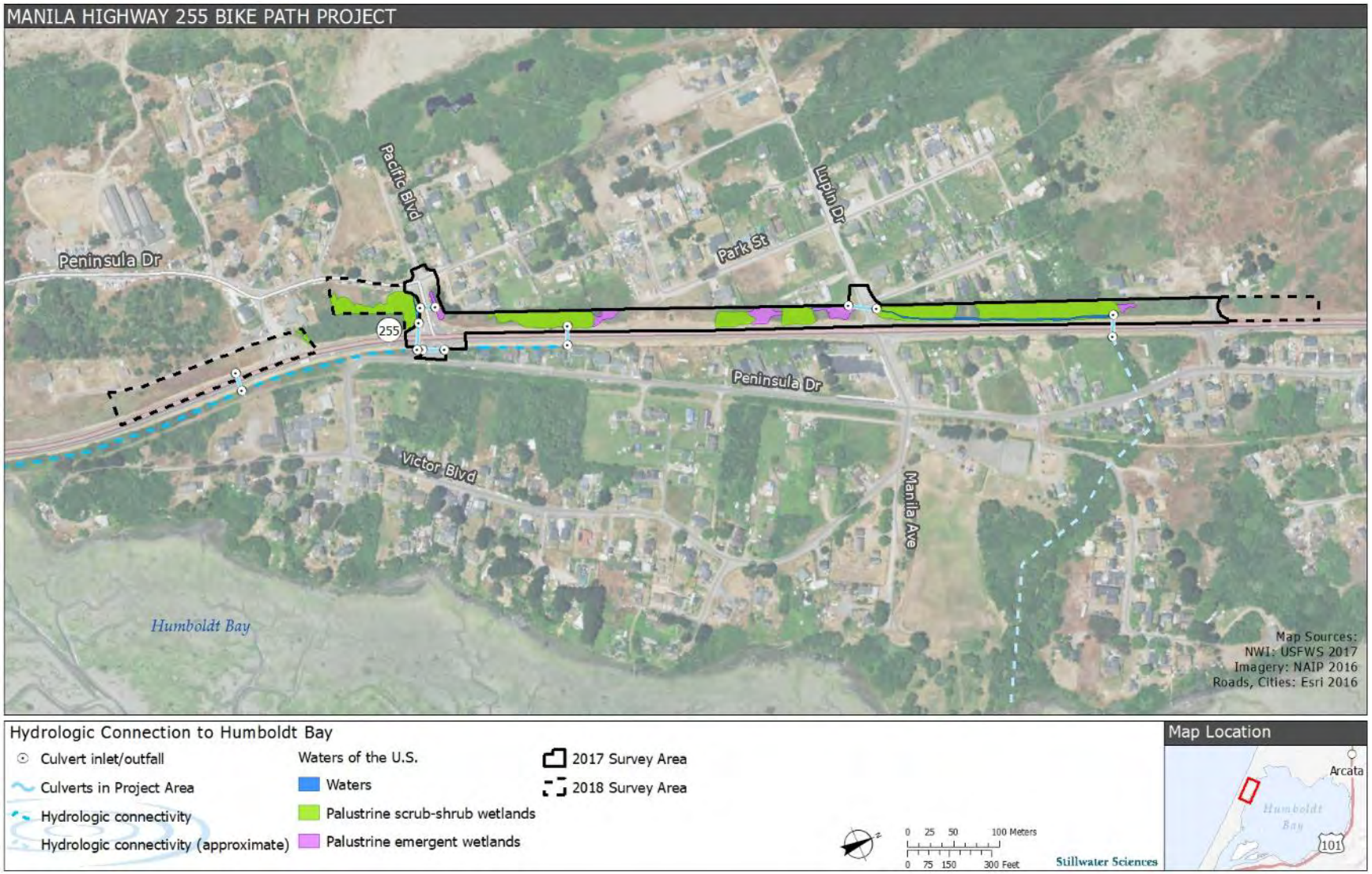


Figure 7. Hydrologic connection of preliminary waters of the U.S. in the Survey Area to Humboldt Bay.

3.2.2 Wetlands

There are a total of 2.24 acres of potential USACE-jurisdictional wetlands and an additional 0.20 acres of CCC/LCP-jurisdictional wetlands in the Survey Area (Table 1, Figures 4–6, Appendix B). Two USACE-jurisdictional wetland types occur: (1) seasonally flooded palustrine emergent wetlands and (2) seasonally flooded palustrine broad-leaved deciduous scrub-shrub wetlands (hereinafter called palustrine emergent wetlands and palustrine scrub-shrub wetlands, respectively) (Figures 4–5). FGDC (2013) defines the palustrine system as all nontidal wetlands dominated by trees, shrubs, persistent emergent plants, emergent mosses or lichens (i.e., non-vascular) and all similar wetlands that occur in tidal areas where salinity due to ocean-derived salts is below 0.5 parts per thousand. Seasonally flooded conditions are those where surface water is present for extended periods (generally for more than a month) during the growing season, but is absent by the end of the season in most years during which the depth to substrate saturation may vary (FGDC 2013). Emergent wetlands are characterized by erect, rooted herbaceous hydrophytes, excluding mosses and lichens, that are the tallest life form, have at least 30% areal coverage, and are present for most of the growing season in most years (FGDC 2013). Broad-leaved deciduous scrub-shrub wetlands are characterized by woody plants of this leaf type that are less than 20 feet tall and are the dominant life form with at least 30% areal coverage (FGDC 2013).

The potential USACE-jurisdictional wetlands form a complex of palustrine scrub-shrub and palustrine emergent wetlands. Dominant vegetation in the palustrine emergent wetland areas varies from herbaceous emergent dune swale species to freshwater emergent species. Palustrine scrub-shrub wetlands are primarily composed of deciduous woody shrubs and trees with a fairly dense understory of herbaceous hydrophytes and/or woody vines. A list of plant species observed is provided in Appendix C.

3.2.2.1 Palustrine emergent wetlands

There are five palustrine emergent wetlands in the Survey Area; two are adjacent to intermittent drainage ditches (PE-1 and PE-4 in Figures 4–5) and three are associated with dune swale features adjacent to palustrine scrub-shrub wetlands (PE-2, PE-3, and PE-5 in Figures 4–5). These wetlands total 0.33 acre in the Survey Area (Table 1).

Hydrophytic plant species *Scirpus microcarpus* (small-fruited bulrush, OBL), *Carex obnupta* (slough sedge, OBL), *Juncus effusus* (soft rush, FACW), *Oenanthe sarmentosa* (water parsley, OBL), and *Potentilla anserina* subsp. *pacifica* (Pacific silverweed, OBL) are predominant throughout the palustrine emergent wetlands adjacent to intermittent drainage ditches in the Survey Area (Figures 4–5). Frequent management activities within the CA-255 ROW and within the upper extent of this wetland was illustrated by mowed *Salix hookeriana* (coastal willow, FACW) seedling recruits and the lack of woody establishment of this species. All wetlands were in topographic depressions that experience long durations of endosaturation by an elevated winter water table. Culverts identified at Pacific Avenue and CA-255 connect these wetlands hydrologically to a potential jurisdictional water of the U.S. (W-1 in Figures 4–5). Sampled data point 3W best characterizes these palustrine emergent wetlands (Appendix B). Dominant hydrophytic vegetation at this location included small-fruited bulrush, water parsley, and seedling or sapling coastal willow; application of the dominance test using the “50/20 rule” confirmed hydrophytic vegetation was present. The soil profile consisted of sandy loam that contained prominent redox concentrations (2–10%) within the upper 16 inches of the soil profile and confirmed the primary hydric soil indicator as sandy redox (S5). Wetland hydrology was

established from the presence of a high water table (greater than 11 inches of the soil pit) and saturation within the upper 11 inches of the soil pit (Appendix B). The paired upland data point 3U lacked all three wetland indicators (hydrophytic vegetation, hydrology, and hydric soils; Appendix B). Upland vegetation was dominated by *Hypochaeris radicata* (rough cat's ear, FACU), *Briza maxima* (rattlesnake grass, UPL), and *Anthoxanthum odoratum* (sweet vernal grass, FACU).

Palustrine emergent wetlands located in dune swale landforms in the Survey Area are adjacent to palustrine scrub-shrub wetlands (PE-2, PE-3, and PE-5 in Figures 4–5). These wetlands are positioned in low gradient depressions with varying cover by hydrophytic vegetation including *Juncus breweri* (salt rush, OBL) and slough sedge. These wetlands are best characterized by data point 2Wb (Figure 4, Appendix B). At this location both hydric soils and wetland hydrology were confirmed by primary indicators sandy redox (S5) and oxidized rhizospheres along living roots (C3), respectively. Results of the dominance test and prevalence index for confirming hydrophytic vegetation were not conclusive at this location; therefore, problematic vegetation was evaluated following procedures in the WMVC Supplement (Section 5 in USACE 2010). Vegetation at this location was a mixture of nonnative, naturalized sweet vernal grass and native salt rush along with *Rubus armeniacus* (Himalayan blackberry, FAC) and *Rubus ursinus* (California blackberry, FACU) (Appendix B). Hydrophytic vegetation was determined by applying guidance described in problematic situation "(F) Aggressive invasive plants" in which a nonnative FACU or UPL plant species, such as sweet vernal grass, become established in wetlands due to its adaptability and aggressive growth habits (USACE 2010). Upland locations adjacent to these wetlands were defined by low to absent cover by hydrophytic plant species, and lack of both hydric soil and wetland hydrology indicators, as observed in data point 2U (Figures 4–5).

Boundaries of the palustrine scrub-shrub wetlands documented in the NWI's *Wetlands Mapper* were modified by the survey crew to the palustrine emergent wetland type (Figures 3–5).

3.2.2.2 Palustrine scrub-shrub wetlands

Palustrine scrub-shrub wetlands totaled 2.24 acres in the Survey Area (Table 1, PS-1–PS-6 in Figures 4–5) and were located in topographically low depressions. Based on historical imagery (Shuster 1947), most of this wetland type was associated with a deflation plain that was a part of a larger coastal dune complex. This region has since been modified by development (e.g., CA-255, community of Manila) and these wetlands are isolated relicts, that are no longer connected to the adjacent dune complex. Several culverts connect these wetlands hydrologically to potential USACE-jurisdictional waters (W-1–W-3 in Figures 4–5). The canopy in the palustrine scrub-shrub wetlands is dominated by coastal willow, *Salix lasiandra* (Pacific willow, FACW), with some low cover by *Morella californica* (wax-myrtle, FACW) and *Pinus contorta* subsp. *contorta* (shore pine, FAC). Established understory species include slough sedge and California blackberry. These wetlands are best described by data point 4W, which represents a coastal willow overstory with emergent herbaceous species, slough sedge and water parsley along with California blackberry in the understory (Appendix B). Hydric soils were determined by the primary indicator sandy redox and a high water table (2+ inches of the soil pit) confirmed wetland hydrology (Appendix B). The upland border was defined by a distinct change in vegetation to upland nonnative grassland, which extended to the edge of CA-255. The paired upland data point 2U lacked all three wetland indicators (Appendix B). Upland vegetation at this location included sweet vernal grass, *Rumex acetosella* (sheep sorrel, FACU), and California blackberry. In the 2018 Survey Area, these wetlands were confirmed by datapoint 101W.

Vegetation was primarily comprised of mixed willow overstory (both coastal willow and *Salix sitchensis* [Sitka willow, FACW]) with a moderate cover of *Rubus spectabilis* (salmon berry, FAC), Himalayan blackberry, and California blackberry throughout the understory. Sandy redox and oxidized rhizospheres along living roots along with secondary indicators of geomorphic position confirmed wetland soils and FAC-neutral test confirmed wetland hydrology at this location (Appendix B). Disturbance along some portions of this the wetland perimeter included brush clearing, dumping of landscaped materials originating from other locations, and establishment of escaped ornamentals (*Carpobrotus edulis* [freeway iceplant]). The upland boundary at this location was also defined by a distinct change in vegetation to upland nonnative grassland, illustrated by upland data point 101U, which lacked all three wetland indicators (Appendix B).

Based on data collected for this delineation and other field observations (Stillwater Sciences 2018), the survey crew confirmed and refined the NWI's *Wetlands Mapper* palustrine scrub-shrub wetland boundaries (Figures 4–5).

3.2.3 Coastal Commission wetlands

In addition to all potential USACE-jurisdictional waters and adjacent wetlands described in Sections 3.2.1 and 3.2.2, an additional 0.20 acres of potential CCC/LCP-jurisdictional wetlands were identified in the Survey Area (Table 1, Figure 6). Boundaries for these wetlands were delineated from data points with at least one positive primary wetland parameter located within the Coastal Zone. Data point 5U describes the one-parameter wetlands. Although both hydric soils and wetland hydrology were lacking at this location, vegetation was dominated by coastal willow which confirmed hydrophytic vegetation. Uplands are characterized by data points 3U and 4U. Both data points lack hydric soils, hydrophytic vegetation, and wetland hydrology. Vegetation was dominated by annual grasses and forbs with low cover by coastal willow recruits (Appendix B).

4 REFERENCES

Baldwin, B. G., D. H. Goldman, D. J. Keil, R. Patterson, and T. J. Rosatti, editors. 2012. The Jepson manual, vascular plants of California. Second edition. University of California Press, Berkeley, California.

Caltrans (California Department of Transportation). 2016. Highway design manual. Sixth edition. Caltrans, Sacramento, California. http://www.dot.ca.gov/design/manuals/hdm.html.

CDWR (California Department of Water Resources). 2004, updated. California's groundwater: Bulletin 118. 2003 basins and subbasins of the North Coast Hydrologic Region. http://www.water.ca.gov/groundwater/bulletin118/northcoast.cfm

Cowardin, L. M., V. Carter, F. C. Golet, and E. T. LaRoe. 1979. Classification of wetlands and deepwater habitats of the United States. FWS/OBS-79/31. U.S. Fish and Wildlife Service, Washington, D.C.

Evenson, R. E. 1959. Geology and ground-water features of the Eureka area, Humboldt County, California. Geological Survey Water-Supply Paper 1470. Prepared in cooperation with the California Department of Water Resources. Washington, D. C.

FGDC (Federal Geographic Data Committee). 2013. Classification of wetlands and deepwater habitats of the United States. Adapted from Cowardin et al. 1979. Prepared by the Wetlands Subcommittee, Federal Geographic Data Committee, Reston, Virginia.

Fuller, R. H. 1975. Water quality in the Mad River basin, Humboldt and Trinity counties, California. Water Resources Investigations Report, 44-75. USGS, Water Resources Division, Menlo Park, California.

GHD, Inc. 2015. Manila Highway 255 (Lupine Ave to Pacific Ave) bike/pedestrian improvements–environmental constraints assessment. Memorandum from J. Wolf and M. Schwarz, GHD Inc., Eureka, CA to H. Seeman, Deputy Director, Humboldt County of Public Works, CA.

Humboldt Bay Harbor, Recreation, and Conservation District. 2018. Humboldt Bay Harbor, Recreation, and Conservation District. Website. www.humboldtbay.org [Accessed November 2018].

Jepson Flora Project, editors. 2018. Jepson eFlora. Website. http://ucjeps.berkeley.edu/eflora/ [Accessed November 2018].

Lichvar, R. W., D. L. Banks, W. N. Kirchner, and N. C. Melvin. 2016. The National wetland plant list: 2016 wetland ratings. Phytoneuron 2016-30: 1–17.

Mersel, M. K., and R. W. Lichvar. 2014. A guide to ordinary high water mark (OHWM) delineation for non-perennial streams in the Western Mountains, Valleys, and Coast Region of the United States. ERDC/CRREL TR-14-1. USACE, Hanover, New Hampshire.

Munsell Color. 2000. Munsell soil color charts, revised washable edition. Munsell Color, Grand Rapids, Michigan.

NCDC. 2018. Climate data. Website. http://www.ncdc.noaa.gov/cdo-web/datatools/.

NRCS (U.S. Department of Agriculture Natural Resource Conservation Service). 2016a. NRCS Official soil series description: Samoa series. https://soilseries.sc.egov.usda.gov/OSD_Docs/S/SAMOA.html

NRCS. 2016b. NRCS Official soil series description: Clambeach series. https://soilseries.sc.egov.usda.gov/OSD_Docs/C/CLAMBEACH.html

NRCS. 2016c. NRCS Official soil series description: Lanphere series. https://soilseries.sc.egov.usda.gov/OSD_Docs/L/LANPHERE.html

NRCS. 2017. National list of hydric soils. http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/use/hydric/

NRCS. 2018a. National list of hydric soils. http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/use/hydric/

NRCS. 2018b. Custom soil resource report for Humboldt County, Central Part, California; Manila Bike Path Project. Downloaded from NRCS Websoil Survey website: https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx

Pomeroy, C., C. J. Thomson, and M. M. Stevens. 2010. California's North Coast fishing communities historical perspective and recent trends: Eureka fishing community profile. National Oceans and Atmospheres Administration California Sea Grant Program.

Shuster, M. 1947. Bay mudflats, Eureka from Hammonds -So. Special Collection, Humboldt Room Photograph Collections.

Stillwater Sciences. 2018. Manila Highway 255 Bike Path Project. Natural Environment Study. Prepared by Stillwater Sciences, Arcata, California for Caltrans, Humboldt County, California.

USACE (U.S. Army Corps of Engineers). 1987. Corps of Engineers wetlands delineation manual. Technical Report Y-87-1. USACE, Environmental Laboratory, Waterways Experiment Station, Vicksburg, Mississippi.

USACE. 2005. Ordinary high water mark identification. Regulatory Guidance Letter No. 05-05.

USACE. 2007. Practices for documenting jurisdiction under Section 404 of the Clean Water Act (CWA) and Sections 9 & 10 of the Rivers & Harbors Act (RHA) of 1899. Regulatory Guidance Letter 07-01.

USACE. 2010. Regional supplement to the Corps of Engineers wetland delineation manual: western mountains, valleys, and coast region (Version 2.0). Prepared by USACE, Vicksburg, Mississippi.

USACE. 2018. Subject: File No. 2018-00047. Preliminary Jurisdictional Determination for the Manila Highway 255 Bike Path Project. Letter to H. Seeman, County of Humboldt, Eureka, California from USACE, San Francisco District, San Francisco, California. 7 March 2018.

USEPA (U.S. Environmental Protection Agency) and USACE. 2008. Clean Water Act jurisdiction following the U.S. Supreme Court's decision in Rapanos v. United States & Carabell v. United States. Available at https://www.epa.gov/cwa-404/2008-rapanos-guidance-and-related-documents

USFWS (United States Fish and Wildlife Service). 2017. National Wetlands Inventory (NWI) wetlands and riparian polygon data. Geospatial wetlands data. USFWS, Arlington, Virginia. Website. http://www.fws.gov/wetlands/

USFWS (United States Fish and Wildlife Service). 2018. National Wetlands Inventory (NWI) wetlands and riparian polygon data. Geospatial wetlands data. USFWS, Arlington, Virginia. Website. http://www.fws.gov/wetlands/

Appendices

Appendix A

Field Delineation Photographs

Figure A-1. Wetland data point 1W.

Figure A-2. Upland data point 1U.

Figure A-3. Wetland data point 2Wa.

Figure A-4. Wetland data point 2Wb.

Figure A-5. Wetland data point 3W.

Figure A-6. Upland data point 3U.

Figure A-7. Wetland data point 2Wc.

Figure A-8. Upland data point 2U.

Figure A-9. Wetland data point 2Wd.

Figure A-10. Wetland data point 2We.

Figure A-11. Wetland data point 4W.

Figure A-12. Upland data point 4U.

Figure A-13. Upland data point 5U, a CCC one-parameter wetland.

Figure A-14. Upland data point 100U.

Figure A-15. Upland data point 101U.

Figure A-16. Wetland data point 101W.

Figure A-17. Upland data point 102U.

Appendix B

Wetland Delineation Datasheets

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Manila Shared Use Path City/County: Manila/Humboldt Sampling Date: 8/1/2017

Applicant/Owner: Humboldt County State: CA Sampling Point: 1U

Investigator(s): EPC, EKT Section, Township, Range: S3 T5N R1W

Landform (hillslope, terrace, etc.): Slope, along R-O-W Local relief (concave, convex, none): Concave Slope (%): 20

Subregion (LRR): LRR A Lat: 40°50'56.09"N Long: 124° 9'55.99"W Datum: WGS 84

Soil Map Unit Name: NOTCOM near Lanphere, 2-75% slopes NWI classification: NONE

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____ No X	**Is the Sampled Area within a Wetland?** Yes _____ No X
Hydric Soil Present?	Yes _____ No X	
Wetland Hydrology Present?	Yes _____ No X	

Remarks:

Wetland parameters are not present and the sampled location is not within a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 2m2)	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix lasiandra	5	Yes	FACW
2.			
3.			
4.			
	5	= Total Cover	
Sapling/Shrub Stratum (Plot size: 2m2)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Herb Stratum (Plot size: 2m2)			
1. Anthoxanthum odoratum	60	Yes	FACU
2. Equisetum arvense	5	No	FACU
3. Fragaria chiloensis	2	No	FACU
4. Plantago lanceolata	8	No	FACU
5. Rubus ursinus	10	No	FACU
6. Daucus carota	5	No	FACU
7. Raphanus sativus	5	No	NL/UPL
8. Briza maxima	40	Yes	UPL
9. Avena barbata	5	No	NL/UPL
10. Hypochaeris radicata	5	No	FACU
11. Holcus lanatus	15	No	FAC
	160	= Total Cover	
Woody Vine Stratum (Plot size: 2m2)			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☐ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Wetland Non-Vascular Plants[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No X

Remarks:

Dominant vegetation is not hydrophytic and dominance test fails.

SOIL

Sampling Point: 1U

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR 3/2	100					Sandy loam	
4-10	2.5Y 3/2	100					Sandy loam	
10-16	2.5 Y 4/2	100					Sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: na

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

No redox features in soil profile. Hydric soil is not present at this location.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stressed Plants (D1) (**LRR A**)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) (**LRR A**)
- ☐ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): _____

Water Table Present? Yes _____ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No X Depth (inches): _____

Wetland Hydrology Present? Yes _____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No moisture/cap fringe in soil pit; no other wetland hydrology indicators observed. FAC Neutral Test fails. Wetland hydrology is not present at this location.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Manila Shared Use Path | City/County: Manila/Humboldt | Sampling Date: 8/1/2017

Applicant/Owner: Humboldt County | State: CA | Sampling Point: 1W

Investigator(s): EPC, EKT | Section, Township, Range: S3 T5N R1W

Landform (hillslope, terrace, etc.): depression | Local relief (concave, convex, none): convex | Slope (%): 5

Subregion (LRR): LRR A | Lat: 40°50'56.33"N | Long: 124° 9'56.13"W | Datum: WGS 84

Soil Map Unit Name: NOTCOM near Lanphere, 2-75% slopes | NWI classification: PSS1C

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X No _____	**Is the Sampled Area within a Wetland?** Yes X No _____
Hydric Soil Present?	Yes X No _____	
Wetland Hydrology Present?	Yes X No _____	

Remarks:

All three wetland parameters are present and the sampled area is within a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 5m2)	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix lasiandra	80	Yes	FACW
2. Salix sitchensis	15	No	
3.			
4.			
	95 = Total Cover		
Sapling/Shrub Stratum (Plot size: 5m2)			
1. Salix hookeriana	25	Yes	FACW
2. Lonicera involucrata	15	Yes	FAC
3. Salix lasiandra	20	Yes	FACW
4.			
5.			
	60 = Total Cover		
Herb Stratum (Plot size: 2m2)			
1. Carex obnupta	80	Yes	OBL
2. Equisetum arvense	5	No	FAC
3. Juncus lescurii	2	No	FACW
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	87 = Total Cover		
Woody Vine Stratum (Plot size: 5m2)			
1. Rubus ursinus	80	Yes	FACU
2.			
	80 = Total Cover		

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 83% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☑ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Wetland Non-Vascular Plants[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No _____

Remarks:

Dominant vegetation is hydrophytic and passes dominance test.

SOIL

Sampling Point: 1W

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR 2/2	95	10YR 5/8	5	C	M	Sandy loam	
8-18	2.5Y 3/1	95	10YR 5/8	5	C	M	Sandy loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☑ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: n/a

Depth (inches): _____

Hydric Soil Present? Yes X No _____

Remarks:

Redox concentrations of iron manganese soft masses present within upper 6" of soil profile and chroma = 2; sandy profile. Hydric soil is present at this location.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stressed Plants (D1) (**LRR A**)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☑ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☑ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) (**LRR A**)
- ☐ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): _____

Water Table Present? Yes _____ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No X Depth (inches): _____

Wetland Hydrology Present? Yes X No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Secondary indicators Geomorphic Position (D2) and FAC-Neutral Test (D5) indicate wetland hydrology is present at this location.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Manila Shared Use Path City/County: Manila/Humboldt Sampling Date: 8/2/2017

Applicant/Owner: Humboldt County State: CA Sampling Point: 2U

Investigator(s): EPC, EKT Section, Township, Range: S3 T5N R1W

Landform (hillslope, terrace, etc.): Plain Local relief (concave, convex, none): Concave Slope (%): 2

Subregion (LRR): LRR A Lat: 40°51'5.06"N Long: 124° 9'51.39"W Datum: WGS 84

Soil Map Unit Name: NOTCOM near Samoa-Clambeach-Dune land complex 0-50% slopes NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No X	**Is the Sampled Area within a Wetland?** Yes _____ No X
Hydric Soil Present?	Yes _____	No X	
Wetland Hydrology Present?	Yes _____	No X	

Remarks:

No wetland parameters are present and sampled are is not within a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 3m2)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: 3m2)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: 2m2)			
1. Anthoxanthum odoratum	80	Yes	FACU
2. Rumex acetosella	35	Yes	FACU
3. Plantago lanceolata	5	No	FACU
4. Rubus lacinatus	2	No	FACU
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	122 = Total Cover		
Woody Vine Stratum (Plot size: 2m2)			
1. Rubus ursinus	20	Yes	FACU
2. Lonicera (hispidula)	20	Yes	(FACU)
	40 = Total Cover		

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☐ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Wetland Non-Vascular Plants[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No X

Remarks:

Dominant vegetation is not hydrophytic.

SOIL

Sampling Point: 2U

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR 3/3	100					Sandy loam	
3-14	2.5Y 3/3	100					Sandy loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: na

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

No hydric soil indicators are evident in the soil sample.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stressed Plants (D1) (**LRR A**)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) (**LRR A**)
- ☐ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): _____

Water Table Present? Yes _____ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No X Depth (inches): _____

Wetland Hydrology Present? Yes _____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No wetland hydrology indicators observed at this location. FAC-Neutral Test failed.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Manila Shared Use Path | City/County: Manila/Humboldt | Sampling Date: 8/1/2017

Applicant/Owner: Humboldt County | State: CA | Sampling Point: 2Wa

Investigator(s): EPC, EKT | Section, Township, Range: S3 T5N R1W

Landform (hillslope, terrace, etc.): swale/depression | Local relief (concave, convex, none): concave | Slope (%): 2

Subregion (LRR): LRR A | Lat: 40°51'2.58"N | Long: 124° 9'52.93"W | Datum: WGS 84

Soil Map Unit Name: NOTCOM near Samoa-Clambeach-Dune land complex 0-50% slopes | NWI classification: NONE

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X No _____	**Is the Sampled Area within a Wetland?** Yes X No _____
Hydric Soil Present?	Yes X No _____	
Wetland Hydrology Present?	Yes X No _____	

Remarks:

All three wetland parameters are present and the sampled area is within a wetland.

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 5m2)			
1. Salix hookeriana	10	Yes	FACW
2.			
3.			
4.			
	10 = Total Cover		
Sapling/Shrub Stratum (Plot size: 5m2)			
1. Salix hookeriana	100	Yes	FACW
2.			
3.			
4.			
5.			
	100 = Total Cover		
Herb Stratum (Plot size: 5m2)			
1. Juncus brewerii	8	Yes	FACW
2. Anthoxanthum odoratum	5	Yes	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	13 = Total Cover		
Woody Vine Stratum (Plot size: 2m2)			
1. Rubus ursinus	10	Yes	FACU
2. Rubus armeniacus	15	Yes	FAC
	25 = Total Cover		

% Bare Ground in Herb Stratum _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☑ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Wetland Non-Vascular Plants[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No _____

Remarks:

Hydrophytic vegetation is dominant at this location, dominance test passed.

SOIL

Sampling Point: 2Wa

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	2.5Y 3/2	98	2.5Y 5/6	2	C	PL	Sandy loam	
8-16	2.5Y 3/2	100					Sandy loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☑ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: n/a

Depth (inches): _____

Hydric Soil Present? Yes X No _____

Remarks:

Greater than 2% redox concentrations within upper six inches that has a matrix of >60% or more chroma of 2 in a band greater than 4 inches thick observed and confirms hydric soil indicator S5, sandy redox is present at this location.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stressed Plants (D1) (**LRR A**)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☑ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☑ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) (**LRR A**)
- ☐ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): _____

Water Table Present? Yes _____ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No X Depth (inches): _____

Wetland Hydrology Present? Yes X No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Secondary indicators Geomorphic Position (D2) and FAC-Neutral Test (D5) confirm wetland hydrology is present at this location.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Manila Shared Use Trail | City/County: Manila/Humboldt | Sampling Date: 8/1/2017

Applicant/Owner: Humboldt County | State: CA | Sampling Point: 2Wb

Investigator(s): EPC, EKT | Section, Township, Range: S3 T5N R1W

Landform (hillslope, terrace, etc.): depression | Local relief (concave, convex, none): concave | Slope (%): 2

Subregion (LRR): LRR A | Lat: 40°51'2.93"N | Long: 124° 9'52.89"W | Datum: WGS 84

Soil Map Unit Name: NOTCOM near Samoa-Clambeach-Dune land complex 0-50% slopes | NWI classification: PSS1C

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation Yes, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X No _____	**Is the Sampled Area within a Wetland?** Yes X No _____
Hydric Soil Present?	Yes X No _____	
Wetland Hydrology Present?	Yes X No _____	

Remarks:

Confirmed problematic hydrophytic vegetation at this sample location and hydric soils and wetland hydrology were observed therefore this sampled area is within a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 5m2)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: 5m2)			
1. Lupinus arboreus	5	Yes	NL/UPL
2.			
3.			
4.			
5.			
	5 = Total Cover		
Herb Stratum (Plot size: 4m2)			
1. Juncus brewerii	35	Yes	FACW
2. Anthoxanthum odoratum	80	Yes	FACU
3. Holcus lanatus	25	No	FAC
4. Vicia sativa	2	No	UPL
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	142 = Total Cover		
Woody Vine Stratum (Plot size: 4m2)			
1. Rubus ursinus	20	Yes	FACU
2. Rubus armeniacus	15	Yes	FAC
	35 = Total Cover		

% Bare Ground in Herb Stratum _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 40% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species	35	x 2 =	70
FAC species	40	x 3 =	120
FACU species	100	x 4 =	400
UPL species	7	x 5 =	35
Column Totals:	182 (A)		625 (B)

Prevalence Index = B/A = 3.4

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☐ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Wetland Non-Vascular Plants[1]
- ☑ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No _____

Remarks:

Naturally problematic due to exotics (4f) present and hydric soil and wetland hydrology are present. Problematic (4f) confirmed- "aggressive invasive plant" =Anthoxanthum odoratum present. Presence by Juncus brewerii with 35% absolute cover indicates dune swale vegetation.

SOIL

Sampling Point: 2Wb

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-1	10YR 2/2	99	10YR 4/6	1	C	PL	Sandy loam	
1-16	2.5Y 3/2	95	2.5Y 5/6	5	C	PL	Sandy loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☑ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: na

Depth (inches): _____

Hydric Soil Present? Yes X No _____

Remarks:

Greater than 2% redox concentrations within upper six inches that has a matrix of >60% or more chroma of 2 in a band greater than 4 inches thick observed and confirms hydric soil indicator S5, sandy redox is present at this location.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☑ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stressed Plants (D1) (**LRR A**)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☑ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) (**LRR A**)
- ☐ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): _____

Water Table Present? Yes _____ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No X Depth (inches): _____

Wetland Hydrology Present? Yes X No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology is present indicated by oxidized rhizospheres along living roots. FAC-Neutral Test failed at location, see remarks in vegetation.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Manila Shared Use Path City/County: Manila/Humboldt Sampling Date: 8/2/2017

Applicant/Owner: Humboldt County State: CA Sampling Point: 2Wc

Investigator(s): EPC, EKT Section, Township, Range: S3 T5N R1W

Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): Concave Slope (%): 5

Subregion (LRR): LRR A Lat: 40°51'4.71"N Long: 124° 9'51.89"W Datum: WGS 84

Soil Map Unit Name: NOTCOM near Samoa-Clambeach-Dune land complex 0-50% slopes NWI classification: PSS1C

Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes x No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes x No _____	**Is the Sampled Area within a Wetland?** Yes x No _____
Hydric Soil Present?	Yes x No _____	
Wetland Hydrology Present?	Yes x No _____	

Remarks:

All three wetland indicators are present and the sampled area is within a wetland.

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 5m2)			
1. Salix hookeriana	85	Yes	FACW
2.			
3.			
4.			
	85 = Total Cover		
Sapling/Shrub Stratum (Plot size: 5m2)			
1. Salix hookeriana	35	Yes	FACW
2.			
3.			
4.			
5.			
	35 = Total Cover		
Herb Stratum (Plot size: 2m2)			
1. Carex obnupta	90	Yes	OBL
2. Polystichum munitum	20	No	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	110 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1. Rubus ursinus	15	Yes	FACU
2.			
	15 = Total Cover		

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☑ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Wetland Non-Vascular Plants[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes x No _____

Remarks:

The dominance test passes and hydrophytic vegetation is present at this sampled area.

SOIL

Sampling Point: 2Wc

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-10	10.5YR 2/2	97	10YR 5/6	3	C	PL	Sandy clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☑ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: Tree roots

Depth (inches): 10"

Hydric Soil Present? Yes X No ____

Remarks:

Greater than 2% redox concentrations within upper six inches that has a matrix of >60% or more chroma of 2 in a band greater than 4 inches thick observed and confirms hydric soil indicator S5, sandy redox is present at this location.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stressed Plants (D1) (**LRR A**)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☑ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☑ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) (**LRR A**)
- ☐ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ____ No X Depth (inches): ____

Water Table Present? Yes ____ No X Depth (inches): ____

Saturation Present? (includes capillary fringe) Yes ____ No X Depth (inches): ____

Wetland Hydrology Present? Yes X No ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Secondary indicators Geomorphic Position (D2) and FAC-Neutral Test (D5) confirm wetland hydrology at this location.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Manila Shared Use Path City/County: Manila/Humboldt Sampling Date: 8/2/2017

Applicant/Owner: Humboldt County State: CA Sampling Point: 2Wd

Investigator(s): EPC, EKT Section, Township, Range: S3 T5N R1W

Landform (hillslope, terrace, etc.): Drainage Local relief (concave, convex, none): Concave Slope (%): 15

Subregion (LRR): LRR A Lat: 40°51'5.87"N Long: 124° 9'51.55"W Datum: WGS 84

Soil Map Unit Name: NOTCOM near Samoa-Clambeach-Dune land complex 0-50% slopes NWI classification: PSS1C

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X No _____	**Is the Sampled Area within a Wetland?** Yes X No _____
Hydric Soil Present?	Yes X No _____	
Wetland Hydrology Present?	Yes X No _____	

Remarks:

All three wetland parameters are present and the sampled area is within a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 3m2)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: 3m2)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: 2m2)			
1. Potentilla anserina	90	Yes	OBL
2. Lotus corniculatus	40	Yes	FAC
3. Holcus lanatus	10	No	FAC
4. Oenanthe sarmentosa	5	No	OBL
5. Symphyotrichum chilense	5	No	FAC
6.			
7.			
8.			
9.			
10.			
11.			
	150 = Total Cover		
Woody Vine Stratum (Plot size: 2m2)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☑ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Wetland Non-Vascular Plants[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No _____

Remarks:

Dominant vegetation is hydrophytic and passes dominance test for hydrophytic vegetation at this location.

SOIL

Sampling Point: 2Wd

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-1	2.5Y 3/2	100					Sandy loam	
1-16	2.5Y 3/2	95	2.5Y 5/6	5	C	PL	Sandy loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☑ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: na

Depth (inches): _____

Hydric Soil Present? Yes X No _____

Remarks:

Greater than 2% redox concentrations within upper six inches that has a matrix of >60% or more chroma of 2 in a band greater than 4 inches thick observed and confirms hydric soil indicator S5, sandy redox is present at this location.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☑ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stressed Plants (D1) (**LRR A**)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☑ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☑ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) (**LRR A**)
- ☐ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): _____

Water Table Present? Yes _____ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No X Depth (inches): _____

Wetland Hydrology Present? Yes X No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Primary indicator Oxidized Rhizospheres along Living Roots (C3) and secondary indicators Geomorphic Position (D2) and FAC-Neutral Test (D5) confirm wetland hydrology is present at this location.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Manila Shared Use Path | City/County: Manila/Humboldt | Sampling Date: 8/2/2017

Applicant/Owner: Humboldt County | State: CA | Sampling Point: 2We

Investigator(s): EPC, EKT | Section, Township, Range: S3 T5N R1W

Landform (hillslope, terrace, etc.): floodplain/swale | Local relief (concave, convex, none): concave/flat | Slope (%): 2

Subregion (LRR): LRR A | Lat: 40°51'5.84"N | Long: 124° 9'51.44"W | Datum: WGS 84

Soil Map Unit Name: NOTCOM near Samoa-Clambeach-Dune land complex 0-50% slopes | NWI classification: PSS1C

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X No _____	**Is the Sampled Area within a Wetland?** Yes X No _____
Hydric Soil Present?	Yes X No _____	
Wetland Hydrology Present?	Yes X No _____	

Remarks:

All three wetland parameters are present and the sampled area is within a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 5m2)	Absolute % Cover	Dominant Species?	Indicator Status
1. Pinus contorta subsp. contorta	15	Yes	FAC
2.			
3.			
4.			
	15 = Total Cover		
Sapling/Shrub Stratum (Plot size: 5m2)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: 2m2)			
1. Carex obnupta	15	No	OBL
2. Holcus lanatus	50	Yes	FAC
3. Trifolium repens	30	No	FAC
4. Lotus corniculatus	45	Yes	FAC
5. Hypochaeris radicata	15	No	FACU
6. Juncus breweri	2	No	FACW
7. Ranunculus repens	30	No	FACW
8.			
9.			
10.			
11.			
	187 = Total Cover		
Woody Vine Stratum (Plot size: 2m2)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☑ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Wetland Non-Vascular Plants[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No _____

Remarks:

Hydrophytic vegetation is dominant at this location, passes dominance test.

SOIL

Sampling Point: 2We

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-1	10YR 2/1	100					Sandy loam	
1-13	10YR 2/2	92	10YR 5/8	8	C	PL	Sandy loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☑ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: na

Depth (inches): _____

Hydric Soil Present? Yes X No _____

Remarks:

Greater than 2% redox concentrations within upper six inches that has a matrix of >60% or more chroma of 2 in a band greater than 4 inches thick observed and confirms hydric soil indicator S5, sandy redox is present at this location.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☑ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stressed Plants (D1) (**LRR A**)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☑ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☑ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) (**LRR A**)
- ☐ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): _____

Water Table Present? Yes _____ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No X Depth (inches): _____

Wetland Hydrology Present? Yes X No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Primary indicator Oxidized Rhizospheres along Living Roots (C3) as well as secondary indicators Geomorphic Position (D2) and FAC-Neutral Test (D5) confirm wetland hydrology is present at this location.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Manila Shared Use Path City/County: Manila/Humboldt Sampling Date: 8/2/2017

Applicant/Owner: Humboldt County State: CA Sampling Point: 3U

Investigator(s): EPC, EKT Section, Township, Range: S3 T5N R1W

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): Concave/flat Slope (%): 2

Subregion (LRR): LRR A Lat: 40°50'52.90"N Long: 124° 9'58.23"W Datum: WGS 84

Soil Map Unit Name: NOTCOM near Lanphere, 2-75% slopes NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No X	**Is the Sampled Area within a Wetland?** Yes _____ No X
Hydric Soil Present?	Yes _____	No X	
Wetland Hydrology Present?	Yes _____	No X	

Remarks:

No wetland parameters are present and the sampled area is not within a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 2m)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: 3m2)			
1. Salix hookeriana	10	Yes	FACW
2.			
3.			
4.			
5.			
	10 = Total Cover		
Herb Stratum (Plot size: 2m2)			
1. Hypochaeris radicata	20	Yes	FACU
2. Briza maxima	30	Yes	NL/UPL
3. Plantago lanceolata	5	No	FACU
4. Rumex acetosella	1	No	FACU
5. Bromus diandrus	15	No	NL/UPL
6. Anthoxanthum odoratum	30	Yes	FACU
7.			
8.			
9.			
10.			
11.			
	101 = Total Cover		
Woody Vine Stratum (Plot size: 2m2)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 25% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☐ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Wetland Non-Vascular Plants[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No X

Remarks:

Dominant vegetation is not hydrophytic and fails dominance test.

SOIL

Sampling Point: 3U

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	2.5Y 3/2	100					Sandy loam	
8-16	2.5Y 4/3	100					Sandy loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: n/a

Depth (inches): _____

Hydric Soil Present? **Yes** _____ **No** X

Remarks:

Hydric soil is not present at this location.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stressed Plants (D1) (**LRR A**)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) (**LRR A**)
- ☐ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): _____

Water Table Present? Yes _____ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No X Depth (inches): _____

Wetland Hydrology Present? **Yes** _____ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology is not present at this location. FAC-Neutral Test fails.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Manila Shared Use Path | City/County: Manila/Humboldt | Sampling Date: 8/2/2017

Applicant/Owner: Humboldt County | State: CA | Sampling Point: 3W

Investigator(s): EPC, EKT | Section, Township, Range: S3 T5N R1W

Landform (hillslope, terrace, etc.): Drainage/roadside | Local relief (concave, convex, none): Concave | Slope (%): _____

Subregion (LRR): LRR A | Lat: 40°50'52.83"N | Long: 124° 9'59.04"W | Datum: WGS 84

Soil Map Unit Name: NOTCOM near Lanphere, 2-75% slopes | NWI classification: NONE

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X No _____	**Is the Sampled Area within a Wetland?** Yes X No _____
Hydric Soil Present?	Yes X No _____	
Wetland Hydrology Present?	Yes X No _____	

Remarks:

All three wetland parameters are present and the sampled area is within a wetland. Wetland near culvert.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 3m2)	Absolute % Cover	Dominant Species?	Indicator Status
1. Pinus radiata	80	Yes	NL/UPL
2.			
3.			
4.			
	80 = Total Cover		
Sapling/Shrub Stratum (Plot size: 3m2)			
1. Salix hookeriana	15	Yes	FACW
2.			
3.			
4.			
5.			
	15 = Total Cover		
Herb Stratum (Plot size: 3m2)			
1. Scirpus microcarpus	90	Yes	OBL
2. Holcus lanatus	8	No	FAC
3. Oenanthe sarmentosa	35	Yes	OBL
4. Equisetum arvense	5	No	FAC
5. Rubus ursinus	2	No	FACU
6.			
7.			
8.			
9.			
10.			
11.			
	140 = Total Cover		
Woody Vine Stratum (Plot size: 2m2)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☑ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Wetland Non-Vascular Plants[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No _____

Remarks:

1m across 2-3 ft deep. Hydrophytic vegetation is dominant and passes dominance test.

SOIL

Sampling Point: 3W

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 3/2	95	10YR 6/8	5	C	M	Sandy loam	
2-16	2.5Y 3/1	90	10YR 5/8	10	C	M	Sandy loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☑ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: n/a

Depth (inches): _____

Hydric Soil Present? Yes X No _____

Remarks:

Greater than 2% redox concentrations within upper six inches that has a matrix of >60% or more chroma of 2 in a band greater than 4 inches thick observed and confirms hydric soil indicator S5, sandy redox is present at this location.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☑ High Water Table (A2)
- ☑ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☑ Hydrogen Sulfide Odor (C1)
- ☑ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stressed Plants (D1) (**LRR A**)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ☑ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☑ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☑ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) (**LRR A**)
- ☐ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): _____

Water Table Present? Yes x No _____ Depth (inches): 11+

Saturation Present? (includes capillary fringe) Yes x No _____ Depth (inches): 11-surface

Wetland Hydrology Present? Yes X No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

A High Water Table (A2) and Saturation (A3) to the surface of the soil pit confirm wetland hydrology is present at this location.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Manila Shared Use Path City/County: Manila/Humboldt Sampling Date: 8/2/2017

Applicant/Owner: Humboldt County State: CA Sampling Point: 4U

Investigator(s): EPC, EKT Section, Township, Range: S3 T5N R1W

Landform (hillslope, terrace, etc.): Hillslope/roadcuts Local relief (concave, convex, none): Concave Slope (%): 50

Subregion (LRR): LRR A Lat: 40°51'8.52"N Long: 124° 9'49.29"W Datum: WGS 84

Soil Map Unit Name: NOTCOM near Samoa-Clambeach-Dune land complex 0-50% slopes NWI classification: NONE

Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes x No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No x	**Is the Sampled Area within a Wetland?** Yes _____ No x
Hydric Soil Present?	Yes _____	No x	
Wetland Hydrology Present?	Yes _____	No x	

Remarks:

No wetland parameters observed and the sampled area is not within a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 3m2)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: 3m2)			
1. Salix hookeriana	5	Yes	FACW
2.			
3.			
4.			
5.			
	5 = Total Cover		
Herb Stratum (Plot size: 2m2)			
1. Daucus carota	15	No	FACU
2. Rubus ursinus	5	No	FACU
3. Avena barbata	5	No	NL/UPL
4. Anthoxanthum odoratum	40	Yes	FACU
5. Briza maxima	20	No	UPL
6. Rumex acetosella	30	Yes	FACU
7. Plantago lanceolata	5	No	FACU
8.			
9.			
10.			
11.			
	120 = Total Cover		
Woody Vine Stratum (Plot size: 2m2)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33.3% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☐ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Wetland Non-Vascular Plants[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No x

Remarks:

Dominant vegetation is not hydrophytic, dominance test for hydrophytic vegetation fails.

SOIL

Sampling Point: 4U

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 3/3	100					Sand	with fill

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: Gravel

Depth (inches): 6"

Hydric Soil Present? Yes ____ No X

Remarks:

No hydric soil indicators evident. Point of restriction fill from adjacent CA-255.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stressed Plants (D1) (**LRR A**)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) (**LRR A**)
- ☐ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ____ No X Depth (inches): ____

Water Table Present? Yes ____ No X Depth (inches): ____

Saturation Present? (includes capillary fringe) Yes ____ No X Depth (inches): ____

Wetland Hydrology Present? Yes ____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No wetland hydrology indicators observed. FAC-Netural Test failed.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Manila Shared Use Path City/County: Manila/Humboldt Sampling Date: 8/2/2017

Applicant/Owner: Humboldt County State: CA Sampling Point: 4W

Investigator(s): EPC, EKT Section, Township, Range: S3 T5N R1W

Landform (hillslope, terrace, etc.): Along sloped drainage Local relief (concave, convex, none): Concave Slope (%): 35

Subregion (LRR): LRR A Lat: 40°51'8.54"N Long: 124° 9'49.40"W Datum: WGS 84

Soil Map Unit Name: NOTCOM near Samoa-Clambeach-Dune land complex 0-50% slopes NWI classification: PSS1C

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X No _____	**Is the Sampled Area within a Wetland?** Yes X No _____
Hydric Soil Present?	Yes X No _____	
Wetland Hydrology Present?	Yes X No _____	

Remarks:

All three wetland parameters observed and this sampled area is within a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 3m2)	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix hookeriana	25	Yes	FACW
2.			
3.			
4.			
	25 = Total Cover		
Sapling/Shrub Stratum (Plot size: 3m2)			
1. Salix hookeriana	90	Yes	FACW
2.			
3.			
4.			
5.			
	90 = Total Cover		
Herb Stratum (Plot size: 2m2)			
1. Scirpus microcarpus	20	Yes	OBL
2. Drypoteris expansa	5	No	FACW
3. Oenanthe sarmentosa	40	Yes	OBL
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	65 = Total Cover		
Woody Vine Stratum (Plot size: 2m2)			
1. Rubus ursinus	35	Yes	FACU
2.			
	35 = Total Cover		

% Bare Ground in Herb Stratum 25

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 80% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☑ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Wetland Non-Vascular Plants[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No _____

Remarks:

Dominant vegetation is hydrophytic, dominance test passes.

SOIL

Sampling Point: 4W

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	2.5Y 3/2	97	2.5Y 5/6	3	C	PL	Sandy clay loam	
8-16	2.5Y 3/2	97	2.5Y 5/6	3	C	PL	Sandy loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☑ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: na

Depth (inches): _____

Hydric Soil Present? Yes X No _____

Remarks:

Greater than 2% redox concentrations within upper six inches that has a matrix of >60% or more chroma of 2 in a band greater than 4 inches thick observed and confirms hydric soil indicator S5, sandy redox is present at this location.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☑ High Water Table (A2)
- ☑ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☑ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stressed Plants (D1) (**LRR A**)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☑ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☑ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) (**LRR A**)
- ☐ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): _____

Water Table Present? Yes X No _____ Depth (inches): 2+

Saturation Present? (includes capillary fringe) Yes X No _____ Depth (inches): 0-2

Wetland Hydrology Present? Yes X No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

High Water Table (A2) and Saturation (A3) within the upper 12 inches of the soil pit confirm wetland hydrology.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Manila Shared Use Path | City/County: Manila/Humboldt | Sampling Date: 8/2/2017

Applicant/Owner: Humboldt County | State: CA | Sampling Point: 5U

Investigator(s): EPC, EKT | Section, Township, Range: S34 T6N R1W

Landform (hillslope, terrace, etc.): Sloped | Local relief (concave, convex, none): Flat | Slope (%): 1

Subregion (LRR): LRR A | Lat: 40°51'17.14"N | Long: 124° 9'44.91"W | Datum: WGS 84

Soil Map Unit Name: NOTCOM near Samoa-Clambeach-Dune land complex 0-50% slopes | NWI classification: NONE

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X No _____	**Is the Sampled Area within a Wetland?** Yes _____ No X
Hydric Soil Present?	Yes _____ No X	
Wetland Hydrology Present?	Yes _____ No X	

Remarks:

Hydric soil and wetland hydrology absent at this sample area and this location is not within a USACE wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 5m2)	Absolute % Cover	Dominant Species?	Indicator Status
1. Pinus radiata	15	Yes	FACU
2. Salix hookeriana	50	Yes	FACW
3.			
4.			
	65 = Total Cover		
Sapling/Shrub Stratum (Plot size: 5m2)			
1. Salix hookeriana	100	Yes	FACW
2.			
3.			
4.			
5.			
	100 = Total Cover		
Herb Stratum (Plot size: 2m2)			
1. Fumaria capreolata	2	No	NL/UPL
2. Rubus ursinus	15	Yes	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	17 = Total Cover		
Woody Vine Stratum (Plot size: 2m2)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species 150	x 2 = 300
FAC species _____	x 3 = _____
FACU species 30	x 4 = 120
UPL species 2	x 5 = 20
Column Totals: 182 (A)	440 (B)

Prevalence Index = B/A = 2.42

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☐ 2 - Dominance Test is >50%
- ☑ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Wetland Non-Vascular Plants[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No _____

Remarks:

Dominance test not conclusive, although hydric soil and hydrology are absent, the prevalence index was reviewed to confirm presence of a CCC wetland. The prevalence index passes for hydrophytic vegetation at this location.

SOIL

Sampling Point: 5U

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-14"	10YR 3/3	98%	10YR 5/8	2	C	M	Sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

Chroma>2 and sandy redox=no. Hydric soil is not present at this location.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stressed Plants (D1) (**LRR A**)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) (**LRR A**)
- ☐ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): _____

Water Table Present? Yes _____ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No X Depth (inches): _____

Wetland Hydrology Present? Yes _____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology is not present at this location. FAC-Neutral Test fails.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Manila Highway 255 Bike Path Project City/County: Manila/Humboldt Sampling Date: 10/17/2018

Applicant/Owner: Humboldt County/Caltrans State: CA Sampling Point: 100U

Investigator(s): E. Craydon, E. Teraoka Section, Township, Range: S3 T5N R1W

Landform (hillslope, terrace, etc.): toeslope Local relief (concave, convex, none): concave-flat Slope (%): 1

Subregion (LRR): LRR A Lat: Long: Datum: WPT 79

Soil Map Unit Name: Urban land-Anthraltic Xerorthents association (0 to 2% slopes) NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No X (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____ No X	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____ No X	
Wetland Hydrology Present?	Yes ____ No X	

Remarks:

No wetland indicators are present and the sampled area is not within a wetland. Sample area is near a culvert, draining towards wetland in opposite side. Rainfall is lower than average for the region in September/October, based on Eureka Weather Station data.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 5m2)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: 5m2)			
1. Lupinus arboreus	5	YES	UPL (NL)
2.			
3.			
4.			
5.			
	5 = Total Cover		
Herb Stratum (Plot size: 3m2)			
1. Anthoxanthum odoratum	15	NO	
2. Armeria maritima	2	NO	
3. Briza maxima	45	YES	UPL (NL)
4. Bromus carinatus	10	NO	
5. Bromus hordeaceous	2	NO	
6. Rumex acetosella	10	NO	
7. Raphanus sativus	5	NO	
8.			
9.			
10.			
11.			
	89 = Total Cover		
Woody Vine Stratum (Plot size: 3m2)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 15

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☐ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Wetland Non-Vascular Plants[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks:

Dominant vegetation is primarily upland and failed dominance test for hydrophytic vegetation in the sampled area.

SOIL

Sampling Point: 100U

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-15	2.5Y 3/2	100					Sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** _____ **No** X

Remarks:

No redoximorphic features are present in the soil profile and no hydric soil indicators observed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stressed Plants (D1) (**LRR A**)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☑ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) (**LRR A**)
- ☐ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): _____

Water Table Present? Yes _____ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No X Depth (inches): _____

Wetland Hydrology Present? **Yes** _____ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

The sample area is located at the bottom of a depression near a culvert. Only one secondary indicator, geomorphic position (D2), was observed in the sampled area. Vegetation failed FAC-Neutral test. Two secondary indicators are required to confirm wetland hydrology.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Manila Highway 255 Bike Path Project City/County: Manila/Humboldt Sampling Date: 10/17/2018

Applicant/Owner: Humboldt County/Caltrans State: CA Sampling Point: 101U

Investigator(s): E. Craydon, E. Teraoka Section, Township, Range: S3 T5N R1W

Landform (hillslope, terrace, etc.): toeslope Local relief (concave, convex, none): flat Slope (%): 1

Subregion (LRR): LRR A Lat: Long: Datum: WGS 84

Soil Map Unit Name: Urban land-Anthraltic Xerorthents association, 0 to 2 percent slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No X (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____ No X	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____ No X	
Wetland Hydrology Present?	Yes ____ No X	

Remarks:

No wetland indicators are present and the sampled area is not within a wetland. Rainfall is lower than average for the region in September/October, based on Eureka Weather Station data.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 5m2)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: 5m2)			
1. Baccharis pilularis	10	YES	UPL
2.			
3.			
4.			
5.			
	10 = Total Cover		
Herb Stratum (Plot size: 3m2)			
1. Anthoxanthum odoratum	40	YES	FACU
2. Carpobrotus edulis	8	NO	
3. Plantago lanceolata	15	NO	
4. Briza maxima	15	NO	
5. Holcus lanatus	40	YES	FAC
6. Avena barbata	2	NO	
7. Oenothera glazioviana	2	NO	
8.			
9.			
10.			
11.			
	122 = Total Cover		
Woody Vine Stratum (Plot size: 3m2)			
1. Rubus ursinus	5	YES	FACU
2.			
	5 = Total Cover		

% Bare Ground in Herb Stratum 5

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 25 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ____	x 1 = ____
FACW species ____	x 2 = ____
FAC species ____	x 3 = ____
FACU species ____	x 4 = ____
UPL species ____	x 5 = ____
Column Totals: ____ (A)	____ (B)

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☐ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Wetland Non-Vascular Plants[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks:

Dominant vegetation is primarily upland and failed dominance test for hydrophytic vegetation in the sampled area.

SOIL

Sampling Point: 101U

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-9	2.5Y 3/2	100					Sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: Gravel/fill

Depth (inches): 9

Hydric Soil Present? Yes ____ **No** X

Remarks:

No redoximorphic features are present in the soil profile and no hydric soil indicators observed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stressed Plants (D1) (**LRR A**)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☑ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) (**LRR A**)
- ☐ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ____ No X Depth (inches): ____

Water Table Present? Yes ____ No X Depth (inches): ____

Saturation Present? (includes capillary fringe) Yes ____ No X Depth (inches): ____

Wetland Hydrology Present? Yes ____ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Only one secondary indicator, geomorphic position (D2), was observed in the sampled area. Vegetation failed FAC-Neutral Test. Two secondary indicators are required to confirm wetland hydrology.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Manila Highway 255 Bike Path Project City/County: Manila/Humboldt Sampling Date: 10/17/2018

Applicant/Owner: Humboldt County/Caltrans State: CA Sampling Point: 101W

Investigator(s): E. Craydon, E. Teraoka Section, Township, Range: S3 T5N R1W

Landform (hillslope, terrace, etc.): swale Local relief (concave, convex, none): concave-flat Slope (%): 0

Subregion (LRR): LRR A Lat: Long: Datum: WGS 84

Soil Map Unit Name: Urban land-Anthraltic Xerorthents association, 0 to 2 percent slopes NWI classification: Freshwater Forested/Shrub Wetland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No X (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X No ____	**Is the Sampled Area within a Wetland?** Yes X No ____
Hydric Soil Present?	Yes X No ____	
Wetland Hydrology Present?	Yes X No ____	

Remarks:

All three wetland indicators are present (hydrophytic vegetation, hydric soils, and hydrology) and the sampled area is within a wetland. Rainfall is lower than average for the region in September/October, based on Eureka Weather Station data.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 5m2)	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix sitchensis	45	YES	FACW
2. Salix hookeriana	45	YES	FACW
3.			
4.			
	90	= Total Cover	
Sapling/Shrub Stratum (Plot size: 5m2)			
1. Salix hookeriana	20	YES	FACW
2. Rubus spectabilis	25	YES	FAC
3.			
4.			
5.			
	45	= Total Cover	
Herb Stratum (Plot size: 3m2)			
1. Holcus lanatus	10	NO	
2. Crocosmia ×crocosmiiflora	15	NO	
3. Ranunculus repens	60	YES	FAC
4. Zantedeschia aethiopica	5	NO	
5. Rumex (pulcher)	1	NO	
6. Tropaeolum majus	2	NO	
7. Dryopteris	5	NO	
8.			
9.			
10.			
11.			
	98	= Total Cover	
Woody Vine Stratum (Plot size: 3 m2)			
1. Rubus armeniacus	45	YES	FAC
2. Rubus ursinus	5	NO	
	50	= Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ____	x 1 = ____
FACW species ____	x 2 = ____
FAC species ____	x 3 = ____
FACU species ____	x 4 = ____
UPL species ____	x 5 = ____
Column Totals: ____ (A)	____ (B)

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☑ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Wetland Non-Vascular Plants[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No ____

Remarks:

Dominance test exceeds 50% and hydrophytic vegetation is present within the sampled area.

SOIL

Sampling Point: 101W

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
1-8	2.5Y 3/2	95	10YR 5/4	5	CS	PL	Loamy Sand	
0-1	5Y 2/1	100					Loam	
8-15	2.5Y 3/2	100					Loamy sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☑ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☑ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No _____

Remarks:

The primary hydric soil indicator sandy redox was observed in the soil profile and a hydric soil is present in the sampled area.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☑ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stressed Plants (D1) (**LRR A**)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☑ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☑ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) (**LRR A**)
- ☐ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): _____

Water Table Present? Yes _____ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No X Depth (inches): _____

Wetland Hydrology Present? Yes X No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

The primary hydrology indicator presence of oxidized rhizospheres along living roots (C3) was observed confirming wetland hydrology. In addition, two secondary indicators, geomorphic position (D2) and FAC-Neutral test (D5) were confirmed.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Manila Highway 255 Bike Path Project City/County: Manila/Humboldt Sampling Date: 10/18/2018

Applicant/Owner: Humboldt County/Caltrans State: CA Sampling Point: 102U

Investigator(s): E. Craydon, E. Teraoka Section, Township, Range: S3 T5N R1W

Landform (hillslope, terrace, etc.): toeslope Local relief (concave, convex, none): flat/undulating Slope (%): 1

Subregion (LRR): LRR A Lat: Long: Datum: WGS 84

Soil Map Unit Name: Samoa-Clambeach complex, 0 to 50 percent slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No X (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____ No X	**Is the Sampled Area within a Wetland?** **Yes** ____ **No** X
Hydric Soil Present?	Yes ____ No X	
Wetland Hydrology Present?	Yes ____ No X	

Remarks:

No wetland indicators are present and the sampled area is not within a wetland. Rainfall is lower than average for the region in September/October, based on Eureka Weather Station data.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 5m2)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: 5m2)			
1. Lupinus arboreus	8	YES	NL-UPL
2.			
3.			
4.			
5.			
	8 = Total Cover		
Herb Stratum (Plot size: 3m2)			
1. Anthoxanthum odoratum	40	YES	FACU
2. Scrophularia californica	2	NO	
3. Rumex acetosella	2	NO	
4. Bromus carinatus	1	NO	
5. Aira caryophyllea	1	NO	
6. Poa (douglassii)	1	NO	
7.			
8.			
9.			
10.			
11.			
	45 = Total Cover		
Woody Vine Stratum (Plot size: 3m2)			
1. Rubus ursinus	45	YES	FACU
2.			
	40 = Total Cover		

% Bare Ground in Herb Stratum 5

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ____	x 1 = ____
FACW species ____	x 2 = ____
FAC species ____	x 3 = ____
FACU species ____	x 4 = ____
UPL species ____	x 5 = ____
Column Totals: ____ (A)	____ (B)

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☐ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Wetland Non-Vascular Plants[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ____ **No** X

Remarks:

Dominant vegetation is primarily upland and failed dominance test for hydrophytic vegetation in the sampled area.

SOIL

Sampling Point: 102U

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-3	7.5YR 2.5/2	100					Loamy sand	
3-16	7.5YR 3/2	100					sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: na

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

No redoximorphic features are present in the soil profile and no hydric soil indicators observed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stressed Plants (D1) (**LRR A**)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☑ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) (**LRR A**)
- ☐ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): _____

Water Table Present? Yes _____ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No X Depth (inches): _____

Wetland Hydrology Present? Yes _____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Only one secondary indicator, geomorphic position (D2), was observed in the sampled area. Vegetation fails FAC-Neutral test. Two secondary indicators are required to confirm wetland hydrology.

OHWM Delineation Cover Sheet

Project: Manila Bike Path **Date:** August 2, 2017

Location: East side of CA-255, Manila, CA **Investigator(s):** Emmalien Craydon (EPC), Emily Teraoka (EKT)

Project Description:
The Manila Bike Path Project is a collaborative plan between Humboldt County, California Department of Transportation (Caltrans) District 1, and the Manila Community Services District to provide a bike path (also known as a shared-use path or multi-use trail) along the west side of State Route 255 (CA-255). The Project also includes intersection improvements along Pacific Avenue and Peninsula Drive and installation of streetlights at the Dean Street/Pacific Avenue intersection. The project may also include a cable barrier between the trail and CA-255.

Describe the river or stream's condition (disturbances, in-stream structures, etc.):
A dry, intermittent, constructed drainage ditch with culvert connections to adjacent waters and ditches. Described as W-1 in the survey area.

Off-site Information

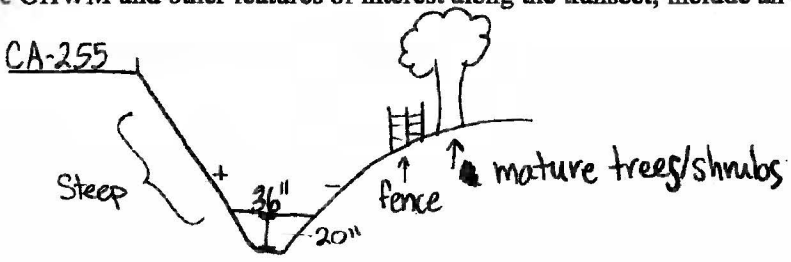
Remotely sensed image(s) acquired? ☐ **Yes** ■ **No** [If yes, attach image(s) to datasheet(s) and indicate approx. locations of transects, OHWM, and any other features of interest on the image(s); describe below] Description:

Hydrologic/hydraulic information acquired? ☐ **Yes** ■ **No** [If yes, attach information to datasheet(s) and describe below.] Description:

List and describe any other supporting information received/acquired:

Instructions: Complete one cover sheet and one or more datasheets for each project site. Each datasheet should capture the dominant characteristics of the OHWM along some length of a given stream. Complete enough datasheets to adequately document up- and/or downstream variability in OHWM indicators, stream conditions, etc. Transect locations can be marked on a recent aerial image or their GPS coordinates noted on the datasheet.

Transect (cross-section) drawing: (choose a location that is representative of the dominant stream characteristics over some distance; label the OHWM and other features of interest along the transect; include an estimate of transect length)



Break in Slope at OHWM: ■ Sharp (> 60°) | ■ Moderate (30–60°) | ☐ Gentle (< 30°) | ☐ None
Notes/Description:

West slope is sharp, East slope is moderate.

Sediment Texture: Estimate percentages to describe the general sediment texture above and below the OHWM

	Clay/Silt <0.05mm	Sand 0.05 – 2mm	Gravel 2mm – 1cm	Cobbles 1 – 10cm	Boulders >10cm	Developed Soil Horizons (Y/N)
Above OHWM	0	100	0	0	0	0
Below OHWM	2	98	0	0	0	0

Notes/Description:

Vegetation: Estimate absolute percent cover to describe general vegetation characteristics above and below the OHWM

	Tree (%)	Shrub (%)	Herb (%)	Bare (%)
Above OHWM	0	0	100	0
Below OHWM	0	0	100	0

Notes/Description:
Vegetation is entirely herbaceous. Emergent hydrophytic vegetation is within the OHWM. Upland grasses are above the OHWM.

Other Evidence: List/describe any additional field evidence and/or lines of reasoning used to support your delineation
A break in bank slope and change in vegetation species and cover supports the delineation.

OHWM Delineation Cover Sheet

Project: Manila Bike Path

Date: August 1-2, 2017; Follow-up September 22, 2017

Location: East side of CA-255, Manila, CA

Investigator(s): Emily Teraoka (EKT), Emmalien Craydon (EPC)

Project Description:

The Manila Bike Path Project is a collaborative plan between Humboldt County, California Department of Transportation (Caltrans) District 1, and the Manila Community Services District to provide a bike path (also known as a shared-use path or multi-use trail) along the west side of State Route 255 (CA-255). The Project also includes intersection improvements along Pacific Avenue and Peninsula Drive and installation of streetlights at the Dean Street/Pacific Avenue intersection. The project may also include a cable barrier between the trail and CA-255.

Describe the river or stream's condition (disturbances, in-stream structures, etc.):

An intermittent constructed drainage ditch with portions dry and wet (some with surface water about 4 inches in depth) during the investigation. Recent vegetation removal is evident during the secondary investigation. Described at W-2 in the survey area.

Off-site Information

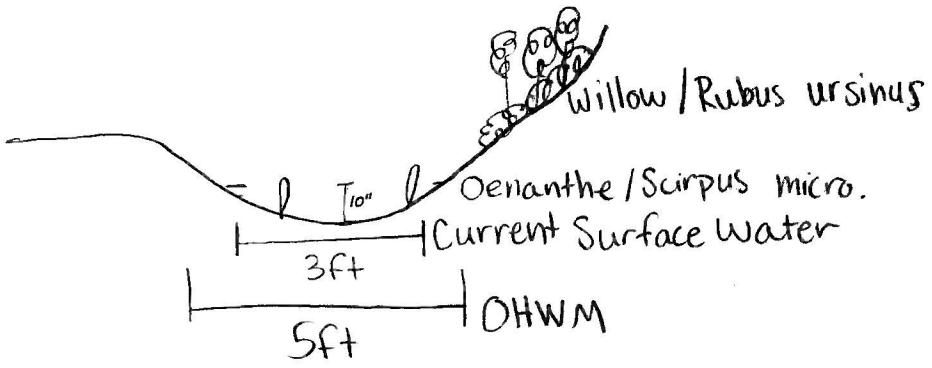
Remotely sensed image(s) acquired? ☐ **Yes** ■ **No** [If yes, attach image(s) to datasheet(s) and indicate approx. locations of transects, OHWM, and any other features of interest on the image(s); describe below] Description:

Hydrologic/hydraulic information acquired? ☐ **Yes** ■ **No** [If yes, attach information to datasheet(s) and describe below.] Description:

List and describe any other supporting information received/acquired:

Instructions: Complete one cover sheet and one or more datasheets for each project site. Each datasheet should capture the dominant characteristics of the OHWM along some length of a given stream. Complete enough datasheets to adequately document up- and/or downstream variability in OHWM indicators, stream conditions, etc. Transect locations can be marked on a recent aerial image or their GPS coordinates noted on the datasheet.

Transect (cross-section) drawing: (choose a location that is representative of the dominant stream characteristics over some distance; label the OHWM and other features of interest along the transect; include an estimate of transect length)



Break in Slope at OHWM: ☐ Sharp (> 60°) | ☐ Moderate (30–60°) | ■ Gentle (< 30°) | ☐ None

Notes/Description:

Gentle to moderate slope

Sediment Texture: Estimate percentages to describe the general sediment texture above and below the OHWM

	Clay/Silt <0.05mm	Sand 0.05 – 2mm	Gravel 2mm – 1cm	Cobbles 1 – 10cm	Boulders >10cm	Developed Soil Horizons (Y/N)
Above OHWM	50	50	0	0	0	0
Below OHWM	70	30	0	0	0	0

Notes/Description:

Vegetation: Estimate absolute percent cover to describe general vegetation characteristics above and below the OHWM

	Tree (%)	Shrub (%)	Herb (%)	Bare (%)
Above OHWM	50	50	25	0
Below OHWM	45	0	5	50

Notes/Description:

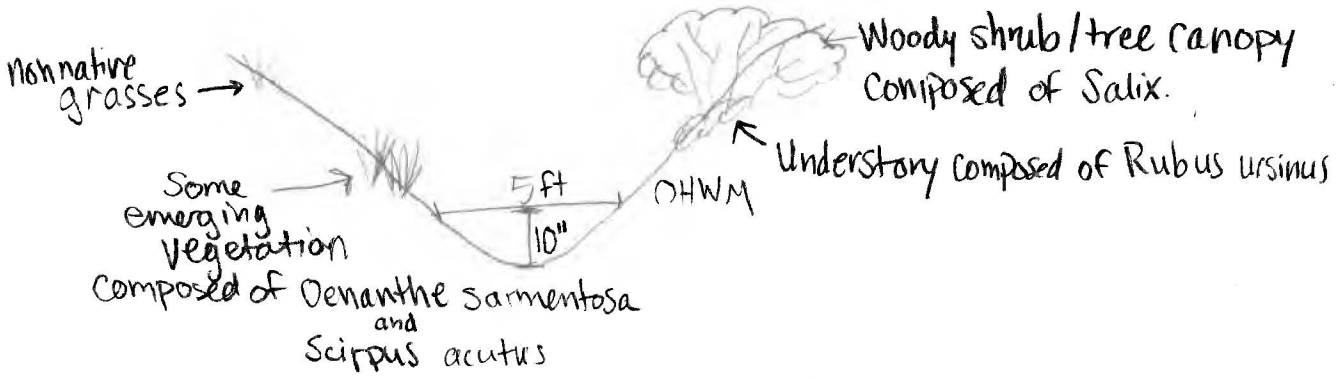
Vegetation present on one side only. Carex obnopta.

Other Evidence: List/describe any additional field evidence and/or lines of reasoning used to support your delineation

Intermittent drainage ditch; soils saturated during the investigation; some standing water (2 in.) observed.

A break in bank slope and change in vegetation species and cover supports the delineation.

Transect (cross-section) drawing: (choose a location that is representative of the dominant stream characteristics over some distance; label the OHWM and other features of interest along the transect; include an estimate of transect length)



Break in Slope at OHWM: ☐ Sharp (> 60°) | ■ Moderate (30–60°) | ☐ Gentle (< 30°) | ☐ None

Notes/Description:

Moderate slope break

Sediment Texture: Estimate percentages to describe the general sediment texture above and below the OHWM

	Clay/Silt <0.05mm	Sand 0.05 – 2mm	Gravel 2mm – 1cm	Cobbles 1 – 10cm	Boulders >10cm	Developed Soil Horizons (Y/N)
Above OHWM	50	50	0	0	0	0
Below OHWM	70	30	0	0	0	0

Notes/Description:

Vegetation: Estimate absolute percent cover to describe general vegetation characteristics above and below the OHWM

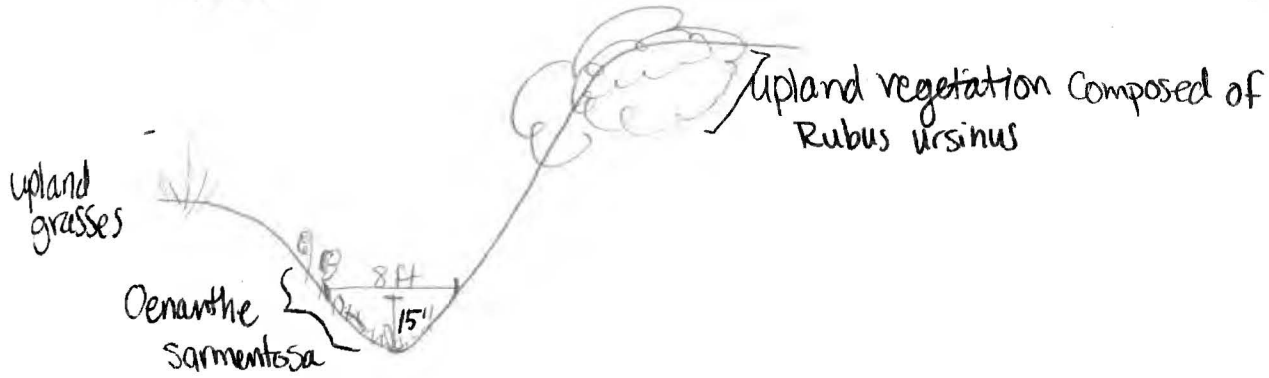
	Tree (%)	Shrub (%)	Herb (%)	Bare (%)
Above OHWM	100	100	100	0
Below OHWM	10	0	15	75

Notes/Description:

Other Evidence: List/describe any additional field evidence and/or lines of reasoning used to support your delineation

A break in bank slope and change in vegetation species and cover supports the delineation.

Transect (cross-section) drawing: (choose a location that is representative of the dominant stream characteristics over some distance; label the OHWM and other features of interest along the transect; include an estimate of transect length)



Break in Slope at OHWM: ☐ Sharp (> 60°) | ■ Moderate (30–60°) | ☐ Gentle (< 30°) | ☐ None

Notes/Description:

Break in slope is moderate on both sides (60 on West bank and 40-50 on East bank).

Sediment Texture: Estimate percentages to describe the general sediment texture above and below the OHWM

	Clay/Silt <0.05mm	Sand 0.05 – 2mm	Gravel 2mm – 1cm	Cobbles 1 – 10cm	Boulders >10cm	Developed Soil Horizons (Y/N)
Above OHWM	20	80	0	0	0	0
Below OHWM	60	40	0	0	0	0

Notes/Description:

Saturated muck below OHWM

Vegetation: Estimate absolute percent cover to describe general vegetation characteristics above and below the OHWM

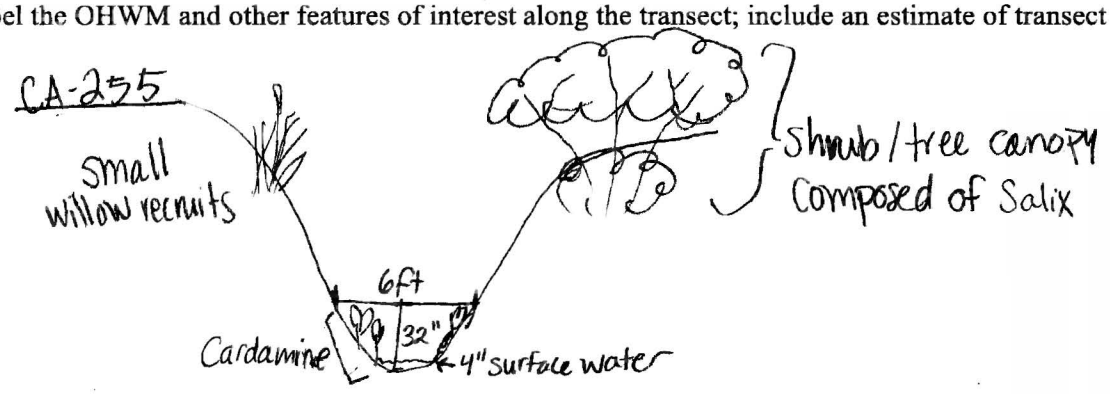
	Tree (%)	Shrub (%)	Herb (%)	Bare (%)
Above OHWM	0	100	0	0
Below OHWM	0	0	90	10

Notes/Description:

Other Evidence: List/describe any additional field evidence and/or lines of reasoning used to support your delineation

A break in bank slope and change in vegetation species and cover supports the delineation.

Transect (cross-section) drawing: (choose a location that is representative of the dominant stream characteristics over some distance; label the OHWM and other features of interest along the transect; include an estimate of transect length)



Break in Slope at OHWM: ■ Sharp (> 60°) | ■ Moderate (30–60°) | ☐ Gentle (< 30°) | ☐ None

Notes/Description:

East bank is sharp, West bank is moderate.

Sediment Texture: Estimate percentages to describe the general sediment texture above and below the OHWM

	Clay/Silt <0.05mm	Sand 0.05 – 2mm	Gravel 2mm – 1cm	Cobbles 1 – 10cm	Boulders >10cm	Developed Soil Horizons (Y/N)
Above OHWM	15	85	0	0	0	0
Below OHWM	80	20	0	0	0	0

Notes/Description:

Standing water present

Vegetation: Estimate absolute percent cover to describe general vegetation characteristics above and below the OHWM

	Tree (%)	Shrub (%)	Herb (%)	Bare (%)
Above OHWM	80	45	0	0
Below OHWM	50	5	100	0

Notes/Description:

Channel is deep and wide with shrubs on both sides. Cardamine is growing in channel bed.

Other Evidence: List/describe any additional field evidence and/or lines of reasoning used to support your delineation

A break in bank slope and change in vegetation species and cover supports the delineation.

Appendix C

List of Plant Species Observed in the Survey Area

Table C-1. Plant species observed during the wetland delineation surveys in the Survey Area.

Scientific name	Common name	Family	Native status	WMVC Rating (Lichvar et al. 2016)
Aira caryophyllea	silver hair grass	Poaceae	Nonnative	FACU
Anthoxanthum odoratum	sweet vernal grass	Poaceae	Nonnative, Cal-IPC Rated Moderate	FACU
Armeria maritima	thrift sea pink	Plumbaginaceae	Native	FAC
Avena barbata	slender wild oat	Poaceae	Nonnative, Cal-IPC Rated Moderate	Not Listed -UPL
Baccharis pilularis	coyote brush	Asteraceae	Native	Not Listed -UPL
Briza maxima	rattlesnake grass, large quaking grass	Poaceae	Nonnative, Cal-IPC Rated Limited	Not Listed -UPL
Bromus carinatus	California brome	Poaceae	Native	Not Listed -UPL
Bromus diandrus	ripgut grass	Poaceae	Nonnative, Cal-IPC Rated Moderate	Not Listed -UPL
Bromus hordeaceus	soft chess	Poaceae	Nonnative, Cal-IPC Rated Limited	FACU
Carex obnupta	slough sedge	Cyperaceae	Native	OBL
Carpobrotus edulis	freeway iceplant	Aizoaceae	Nonnative, Cal-IPC Rated High	Not Listed- UPL
Crocosmia ×crocosmiiflora	montbretia	Iridaceae	Nonnative, Cal-IPC Rated Limited	FAC
Daucus carota	carrot, Queen Anne's lace	Apiaceae	Nonnative	FACU
Dryopteris expansa	spreading wood fern	Dryopteridaceae	Native	FACW
Equisetum arvense	common horsetail	Equisetaceae	Native	FAC
Fragaria chiloensis	beach strawberry	Rosaceae	Native	FACU
Fumaria capreolata	White ramping fumitory	Papaveraceae	Nonnative	Not Listed -UPL
Holcus lanatus	common velvet grass	Poaceae	Nonnative, Cal-IPC Rated Moderate	FAC
Hypochaeris radicata	rough cat's-ear	Asteraceae	Nonnative, Cal-IPC Rated Moderate	FACU
Juncus breweri	salt or brewer's rush	Juncaceae	Native	FACW
Juncus lescurii	San Francisco rush	Juncaceae	Native	FACW
Lonicera sp.	honeysuckle	Caprifoliaceae	Native	FACU
Lonicera involucrata	twinberry	Caprifoliaceae	Native	FAC
Lotus corniculatus	bird's-foot trefoil	Fabaceae	Nonnative	FAC
Lupinus arboreus	yellow bush lupine	Fabaceae	Native (Nonnative to Humboldt County)	Not Listed -UPL
Tropaeolum majus	garden nasturtium	Tropaeolaceae	Nonnative	UPL
Oenanthe sarmentosa	water parsley	Apiaceae	Native	OBL
Oenothera glazioviana	redsepal evening primrose	Onagraceae	Nonnative	Not Listed -UPL
Pinus contorta subsp. *contorta*	shore pine	Pinaceae	Native	FAC
Pinus radiata	Monterey pine	Pinaceae	Native	Not Listed -UPL
Plantago lanceolata	English plantain	Plantaginaceae	Nonnative, Cal-IPC Rated Limited	FACU

Scientific name	Common name	Family	Native status	WMVC Rating (Lichvar et al. 2016)
Poa douglasii	sand dune blue grass	Poaceae	Native	FACU
Polystichum munitum	western sword fern	Dryopteridaceae	Native	FACU
Potentilla anserina subsp. *pacifica*	Pacific silverweed	Rosaceae	Native	OBL
Ranunculus repens	common creeping buttercup	Ranunculaceae	Nonnative, Cal-IPC Rated Limited	FAC
Raphanus sativus	radish	Brassicaceae	Nonnative, Cal-IPC Rated Limited	Not Listed -UPL
Rubus armeniacus	Himalayan blackberry	Rosaceae	Nonnative, Cal-IPC Rated High	FAC
Rubus laciniatus	cutleaf blackberry	Rosaceae	Nonnative	FACU
Rubus spectabilis	salmon berry	Rosaceae	Native	FAC
Rubus ursinus	California blackberry	Rosaceae	Native	FACU
Rumex acetosella	sheep sorrel	Polygonaceae	Nonnative, Cal-IPC Rated Moderate	FACU
Rumex (*pulcher*)	fiddle dock	Polygonaceae	Nonnative	FAC
Salix hookeriana	coastal willow	Salicaceae	Native	FACW
Salix lasiandra	Pacific willow	Salicaceae	Native	FACW
Salix sitchensis	Sitka willow	Salicaceae	Native	FACW
Scirpus microcarpus	small-fruited bulrush	Cyperaceae	Native	OBL
Scrophularia californica	California figwort	Scrophulariaceae	Native	FAC
Symphyotrichum chilense	Pacific aster	Asteraceae	Native	FAC
Trifolium repens	white clover	Fabaceae	Nonnative	FAC
Vicia sativa	common vetch	Fabaceae	Nonnative	UPL
Zantedeschia aethiopica	calla-lily	Araceae	Nonnative, Cal-IPC Rated Limited	OBL

Appendix B

Species Query Results

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Arcata Fish And Wildlife Office
1655 Heindon Road
Arcata, CA 95521-4573
Phone: (707) 822-7201 Fax: (707) 822-8411

In Reply Refer To:
Consultation Code: 08EACT00-2017-SLI-0386
Event Code: 08EACT00-2019-E-00079
Project Name: Manila Bike Path

November 06, 2018

Subject: Updated list of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Arcata Fish And Wildlife Office
1655 Heindon Road
Arcata, CA 95521-4573
(707) 822-7201

Project Summary

Consultation Code: 08EACT00-2017-SLI-0386

Event Code: 08EACT00-2019-E-00079

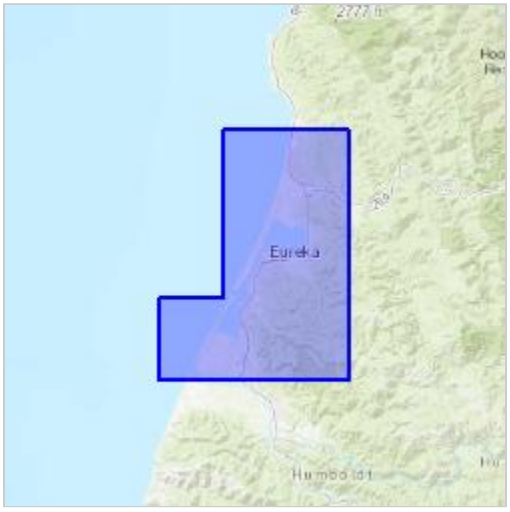
Project Name: Manila Bike Path

Project Type: TRANSPORTATION

Project Description: Scoping for the Manila bike path. Project area includes Quads: Eureka, Arcata South, Arcata North, Fields Landing, Tyree City, Cannibal Island, and McWhinney Creek.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/40.8124999976456N124.12500408782202W



Counties: Humboldt, CA

Endangered Species Act Species

There is a total of 10 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Birds

NAME	STATUS
Marbled Murrelet *Brachyramphus marmoratus* Population: U.S.A. (CA, OR, WA) There is **final** critical habitat for this species. Your location overlaps the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/4467	Threatened
Northern Spotted Owl *Strix occidentalis caurina* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/1123	Threatened
Short-tailed Albatross *Phoebastria (=Diomedea) albatrus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/433	Endangered
Western Snowy Plover *Charadrius nivosus nivosus* Population: Pacific Coast population DPS-U.S.A. (CA, OR, WA), Mexico (within 50 miles of Pacific coast) There is **final** critical habitat for this species. Your location overlaps the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8035	Threatened
Yellow-billed Cuckoo *Coccyzus americanus* Population: Western U.S. DPS There is **proposed** critical habitat for this species. Your location overlaps the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/3911	Threatened

Reptiles

NAME	STATUS
Green Sea Turtle *Chelonia mydas* Population: East Pacific DPS No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6199	Threatened

Fishes

NAME	STATUS
Tidewater Goby *Eucyclogobius newberryi* There is **final** critical habitat for this species. Your location overlaps the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/57	Endangered

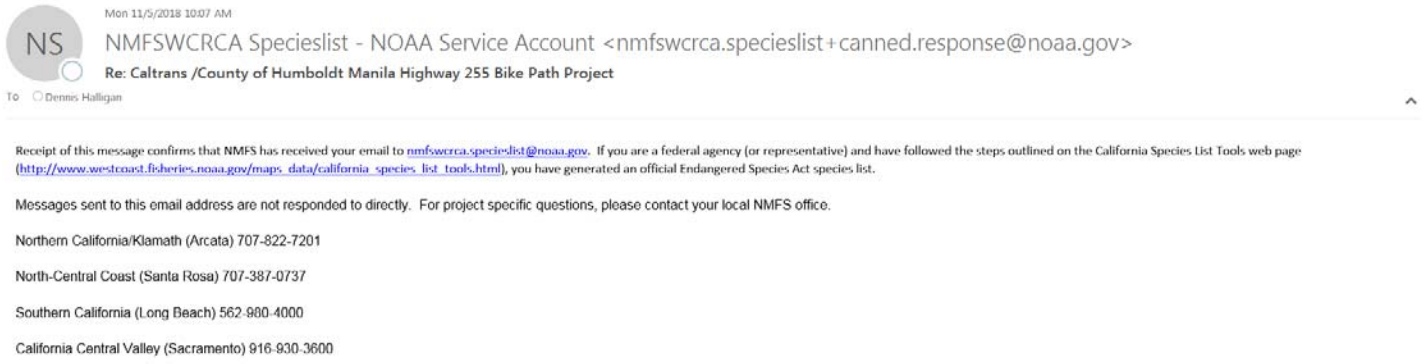
Flowering Plants

NAME	STATUS
Beach Layia *Layia carnosa* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6728	Endangered
Menzies' Wallflower *Erysimum menziesii* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/2935	Endangered
Western Lily *Lilium occidentale* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/998	Endangered

Critical habitats

There are 4 critical habitats wholly or partially within your project area under this office's jurisdiction.

NAME	STATUS
Marbled Murrelet *Brachyramphus marmoratus* https://ecos.fws.gov/ecp/species/4467#crithab	Final
Tidewater Goby *Eucyclogobius newberryi* https://ecos.fws.gov/ecp/species/57#crithab	Final
Western Snowy Plover *Charadrius nivosus nivosus* https://ecos.fws.gov/ecp/species/8035#crithab	Final
Yellow-billed Cuckoo *Coccyzus americanus* https://ecos.fws.gov/ecp/species/3911#crithab	Proposed



Mon 11/5/2018 10:07 AM

NMFSWCRCA Specieslist - NOAA Service Account <nmfswcrca.specieslist+canned.response@noaa.gov>

Re: Caltrans /County of Humboldt Manila Highway 255 Bike Path Project

To Dennis Halligan

Receipt of this message confirms that NMFS has received your email to nmfswcrca.specieslist@noaa.gov. If you are a federal agency (or representative) and have followed the steps outlined on the California Species List Tools web page (http://www.westcoast.fisheries.noaa.gov/maps_data/california_species_list_tools.html), you have generated an official Endangered Species Act species list.

Messages sent to this email address are not responded to directly. For project specific questions, please contact your local NMFS office.

Northern California/Klamath (Arcata) 707-822-7201

North-Central Coast (Santa Rosa) 707-387-0737

Southern California (Long Beach) 562-980-4000

California Central Valley (Sacramento) 916-930-3600

NOAA Fisheries – California Species List Tools

https://www.westcoast.fisheries.noaa.gov/maps_data/california_species_list_tools.html

Accessed November 5, 2018

Quad Name **Eureka**
Quad Number **40124-G2**

ESA Anadromous Fish

SONCC Coho ESU (T) - **X**
CCC Coho ESU (E) -
CC Chinook Salmon ESU (T) - **X**
CVSR Chinook Salmon ESU (T) -
SRWR Chinook Salmon ESU (E) -
NC Steelhead DPS (T) - **X**
CCC Steelhead DPS (T) -
SCCC Steelhead DPS (T) -
SC Steelhead DPS (E) -
CCV Steelhead DPS (T) -
Eulachon (T) -
sDPS Green Sturgeon (T) - **X**

ESA Anadromous Fish Critical Habitat

SONCC Coho Critical Habitat - **X**
CCC Coho Critical Habitat -

CC Chinook Salmon Critical Habitat - X
CVSR Chinook Salmon Critical Habitat -
SRWR Chinook Salmon Critical Habitat -
NC Steelhead Critical Habitat - X
CCC Steelhead Critical Habitat -
SCCC Steelhead Critical Habitat -
SC Steelhead Critical Habitat -
CCV Steelhead Critical Habitat -
Eulachon Critical Habitat -
sDPS Green Sturgeon Critical Habitat - X

ESA Marine Invertebrates

Range Black Abalone (E) -
Range White Abalone (E) -

ESA Marine Invertebrates Critical Habitat

Black Abalone Critical Habitat -

ESA Sea Turtles

East Pacific Green Sea Turtle (T) - X
Olive Ridley Sea Turtle (T/E) - X
Leatherback Sea Turtle (E) - X
North Pacific Loggerhead Sea Turtle (E) -

ESA Whales

Blue Whale (E) - X
Fin Whale (E) - X
Humpback Whale (E) - X
Southern Resident Killer Whale (E) - X
North Pacific Right Whale (E) - X
Sei Whale (E) - X
Sperm Whale (E) - X

ESA Pinnipeds

Guadalupe Fur Seal (T) -
Steller Sea Lion Critical Habitat -

Essential Fish Habitat

Coho EFH - X
Chinook Salmon EFH - X
Groundfish EFH - X
Coastal Pelagics EFH - X
Highly Migratory Species EFH -

Summary Table Report

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: Quad IS (Tyee City (4012482) OR Arcata North (4012481) OR Arcata South (4012471) OR Eureka (4012472) OR Cannibal Island (4012463) OR Fields Landing (4012462) OR McWhinney Creek (4012461))

Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks						Population Status		Presence		
						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Abronia umbellata var. breviflora pink sand-verbena	G4G5T2 S2	None None	Rare Plant Rank - 1B.1 BLM_S-Sensitive	5 236	61 S:16	0	9	2	1	1	3	5	11	15	1	0
Accipiter striatus sharp-shinned hawk	G5 S4	None None	CDFW_WL-Watch List IUCN_LC-Least Concern	200 580	22 S:2	0	0	2	0	0	0	0	2	2	0	0
Acipenser medirostris green sturgeon	G3 S1S2	Threatened None	AFS_VU-Vulnerable CDFW_SSC-Species of Special Concern IUCN_NT-Near Threatened NMFS_SC-Species of Concern	0 0	1 S:1	0	0	0	0	0	1	0	1	1	0	0
Anodonta californiensis California floater	G3Q S2?	None None	USFS_S-Sensitive	41 41	6 S:1	0	0	0	0	0	1	1	0	1	0	0
Aplodontia rufa humboldtiana Humboldt mountain beaver	G5TNR SNR	None None		50 1,700	28 S:16	0	0	0	0	0	16	13	3	16	0	0
Arborimus albipes white-footed vole	G3G4 S2	None None	CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern	15 15	3 S:1	0	0	0	0	0	1	1	0	1	0	0
Arborimus pomo Sonoma tree vole	G3 S3	None None	CDFW_SSC-Species of Special Concern IUCN_NT-Near Threatened	40 1,600	222 S:7	0	0	0	0	0	7	7	0	7	0	0
Ardea alba great egret	G5 S4	None None	CDF_S-Sensitive IUCN_LC-Least Concern	4 194	43 S:6	1	0	0	0	0	5	4	2	6	0	0
Ardea herodias great blue heron	G5 S4	None None	CDF_S-Sensitive IUCN_LC-Least Concern	4 450	155 S:13	6	0	0	0	0	7	6	7	13	0	0
Ascaphus truei Pacific tailed frog	G4 S3S4	None None	CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern	100 1,027	491 S:8	0	0	0	0	0	8	5	3	8	0	0

Summary Table Report

California Department of Fish and Wildlife

California Natural Diversity Database

Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks						Population Status		Presence		
						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Astragalus pycnostachyus var. pycnostachyus coastal marsh milk-vetch	G2T2 S2	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive SB_SBBG-Santa Barbara Botanic Garden		25 S:1	0	0	0	0	0	1	1	0	1	0	0
Bombus caliginosus obscure bumble bee	G4? S1S2	None None	IUCN_VU-Vulnerable	0 2,100	181 S:8	0	0	0	0	0	8	8	0	8	0	0
Bombus occidentalis western bumble bee	G2G3 S1	None None	USFS_S-Sensitive XERCES_IM-Imperiled	10 2,100	282 S:9	0	0	0	0	0	9	9	0	9	0	0
Brachyramphus marmoratus marbled murrelet	G3G4 S1	Threatened Endangered	CDF_S-Sensitive IUCN_EN-Endangered NABCI_RWL-Red Watch List	1,200 1,800	110 S:4	0	2	0	0	0	2	4	0	4	0	0
Bryoria spiralifera twisted horsehair lichen	G3 S1S2	None None	Rare Plant Rank - 1B.1	30 70	8 S:3	0	0	0	0	0	3	1	2	3	0	0
Cardamine angulata seaside bittercress	G4G5 S3	None None	Rare Plant Rank - 2B.1	310 310	32 S:1	0	0	0	0	0	1	1	0	1	0	0
Carex arcta northern clustered sedge	G5 S1	None None	Rare Plant Rank - 2B.2	200 500	10 S:2	0	0	0	0	0	2	2	0	2	0	0
Carex leptalea bristle-stalked sedge	G5 S1	None None	Rare Plant Rank - 2B.2	300 300	8 S:1	0	0	0	0	0	1	1	0	1	0	0
Carex lyngbyei Lyngbye's sedge	G5 S3	None None	Rare Plant Rank - 2B.2	0 20	29 S:15	2	4	3	0	0	6	6	9	15	0	0
Carex praticola northern meadow sedge	G5 S2	None None	Rare Plant Rank - 2B.2		14 S:1	0	0	0	0	0	1	1	0	1	0	0
Castilleja ambigua var. humboldtiensis Humboldt Bay owl's-clover	G4T2 S2	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive	5 65	31 S:21	2	8	2	0	0	9	7	14	21	0	0
Castilleja litoralis Oregon coast paintbrush	G3 S3	None None	Rare Plant Rank - 2B.2	25 500	39 S:3	0	0	0	0	0	3	2	1	3	0	0
Charadrius alexandrinus nivosus western snowy plover	G3T3 S2S3	Threatened None	CDFW_SSC-Species of Special Concern NABCI_RWL-Red Watch List USFWS_BCC-Birds of Conservation Concern	10 23	138 S:5	0	1	0	0	0	4	3	2	5	0	0

Summary Table Report

California Department of Fish and Wildlife

California Natural Diversity Database

Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks						Population Status		Presence		
						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Charadrius montanus mountain plover	G3 S2S3	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_NT-Near Threatened NABCI_RWL-Red Watch List USFWS_BCC-Birds of Conservation Concern	4 7	90 S:2	0	0	0	0	0	2	0	2	2	0	0
Chloropyron maritimum ssp. palustre Point Reyes salty bird's-beak	G4?T2 S2	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive	5 10	68 S:15	2	6	1	1	0	5	5	10	15	0	0
Cicindela hirticollis gravida sandy beach tiger beetle	G5T2 S2	None None		10 10	34 S:1	0	0	0	0	1	0	1	0	0	0	1
Circus hudsonius northern harrier	G5 S3	None None	CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern	6 6	53 S:1	0	0	1	0	0	0	0	1	1	0	0
Coastal Terrace Prairie Coastal Terrace Prairie	G2 S2.1	None None		160 160	8 S:1	0	1	0	0	0	0	1	0	1	0	0
Collinsia corymbosa round-headed Chinese-houses	G1 S1	None None	Rare Plant Rank - 1B.2		13 S:1	0	0	0	0	0	1	1	0	1	0	0
Corynorhinus townsendii Townsend's big-eared bat	G3G4 S2	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern USFS_S-Sensitive WBWG_H-High Priority	30 250	626 S:3	0	0	0	0	0	3	3	0	3	0	0
Coturnicops noveboracensis yellow rail	G4 S1S2	None None	CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern NABCI_RWL-Red Watch List USFS_S-Sensitive USFWS_BCC-Birds of Conservation Concern	4 24	45 S:4	0	0	0	0	0	4	3	1	4	0	0
Egretta thula snowy egret	G5 S4	None None	IUCN_LC-Least Concern	4 47	20 S:3	1	0	0	0	0	2	1	2	3	0	0

Summary Table Report

California Department of Fish and Wildlife

California Natural Diversity Database

Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks						Population Status		Presence		
						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Elanus leucurus white-tailed kite	G5 S3S4	None None	BLM_S-Sensitive CDFW_FP-Fully Protected IUCN_LC-Least Concern	60 60	178 S:2	0	0	0	0	0	2	0	2	2	0	0
Emys marmorata western pond turtle	G3G4 S3	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_VU-Vulnerable USFS_S-Sensitive	3 400	1350 S:8	0	3	1	0	0	4	1	7	8	0	0
Entosphenus tridentatus Pacific lamprey	G4 S4	None None	AFS_VU-Vulnerable BLM_S-Sensitive CDFW_SSC-Species of Special Concern USFS_S-Sensitive	14 43	9 S:5	0	0	0	0	0	5	1	4	5	0	0
Erethizon dorsatum North American porcupine	G5 S3	None None	IUCN_LC-Least Concern	13 817	508 S:9	0	0	0	0	0	9	3	6	9	0	0
Erysimum menziesii Menzies' wallflower	G1 S1	Endangered Endangered	Rare Plant Rank - 1B.1 SB_RSABG-Rancho Santa Ana Botanic Garden	5 30	19 S:6	2	2	1	1	0	0	0	6	6	0	0
Erythronium revolutum coast fawn lily	G4G5 S3	None None	Rare Plant Rank - 2B.2		154 S:1	0	0	0	0	0	1	1	0	1	0	0
Eucyclogobius newberryi tidewater goby	G3 S3	Endangered None	AFS_EN-Endangered CDFW_SSC-Species of Special Concern IUCN_VU-Vulnerable	0 12	127 S:10	1	1	0	1	0	7	1	9	10	0	0
Fissidens pauperculus minute pocket moss	G3? S2	None None	Rare Plant Rank - 1B.2 USFS_S-Sensitive	100 650	22 S:3	0	0	0	0	0	3	3	0	3	0	0
Gilia capitata ssp. pacifica Pacific gilia	G5T3 S2	None None	Rare Plant Rank - 1B.2	250 250	73 S:1	0	0	0	0	0	1	1	0	1	0	0
Gilia millefoliata dark-eyed gilia	G2 S2	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive	5 50	54 S:11	1	4	1	0	0	5	5	6	11	0	0

Summary Table Report

California Department of Fish and Wildlife

California Natural Diversity Database

Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks						Population Status		Presence		
						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Haliaeetus leucocephalus bald eagle	G5 S3	Delisted Endangered	BLM_S-Sensitive CDF_S-Sensitive CDFW_FP-Fully Protected IUCN_LC-Least Concern USFS_S-Sensitive USFWS_BCC-Birds of Conservation Concern	580 580	327 S:1	1	0	0	0	0	0	0	1	1	0	0
Hesperevax sparsiflora var. brevifolia short-leaved evax	G4T3 S2	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive	10 13	56 S:4	0	0	1	0	0	3	2	2	4	0	0
Lasthenia californica ssp. macrantha perennial goldfields	G3T2 S2	None None	Rare Plant Rank - 1B.2		59 S:1	0	0	0	0	0	1	1	0	1	0	0
Lathyrus japonicus seaside pea	G5 S2	None None	Rare Plant Rank - 2B.1	5 200	24 S:3	0	0	0	0	0	3	3	0	3	0	0
Lathyrus palustris marsh pea	G5 S2	None None	Rare Plant Rank - 2B.2	10 10	13 S:2	0	0	0	0	0	2	1	1	2	0	0
Layia carnosa beach layia	G2 S2	Endangered Endangered	Rare Plant Rank - 1B.1 SB_RSABG-Rancho Santa Ana Botanic Garden	10 40	25 S:6	0	3	1	0	0	2	0	6	6	0	0
Lilium occidentale western lily	G1 S1	Endangered Endangered	Rare Plant Rank - 1B.1 SB_BerrySB-Berry Seed Bank	30 350	16 S:9	0	3	1	1	3	1	3	6	6	3	0
Lycopodium clavatum running-pine	G5 S3	None None	Rare Plant Rank - 4.1	160 1,860	120 S:35	2	10	13	3	0	7	6	29	35	0	0
Margaritifera falcata western pearlshell	G4G5 S1S2	None None		75 317	78 S:2	0	0	0	0	0	2	1	1	2	0	0
Martes caurina humboldtensis Humboldt marten	G5T1 S1	None Candidate Endangered	CDFW_SSC-Species of Special Concern USFS_S-Sensitive	1,100 1,100	44 S:1	0	0	0	0	0	1	1	0	1	0	0
Mitellastra caulescens leafy-stemmed mitrewort	G5 S4	None None	Rare Plant Rank - 4.2	1,200 1,200	21 S:1	0	1	0	0	0	0	0	1	1	0	0
Monotropa uniflora ghost-pipe	G5 S2	None None	Rare Plant Rank - 2B.2	100 100	89 S:1	0	0	0	0	0	1	1	0	1	0	0

Summary Table Report

California Department of Fish and Wildlife

California Natural Diversity Database

Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks						Population Status		Presence		
						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Montia howellii Howell's montia	G3G4 S2	None None	Rare Plant Rank - 2B.2	39 1,600	110 S:13	0	3	1	4	3	2	1	12	10	3	0
Myotis evotis long-eared myotis	G5 S3	None None	BLM_S-Sensitive IUCN_LC-Least Concern WBWG_M-Medium Priority	40 429	139 S:2	0	1	0	0	0	1	1	1	2	0	0
Northern Coastal Salt Marsh Northern Coastal Salt Marsh	G3 S3.2	None None		0 0	53 S:11	1	0	0	0	0	10	11	0	11	0	0
Northern Foredune Grassland Northern Foredune Grassland	G1 S1.1	None None		50 50	1 S:1	0	0	0	0	0	1	1	0	1	0	0
Nycticorax nycticorax black-crowned night heron	G5 S4	None None	IUCN_LC-Least Concern	4 194	37 S:8	1	0	0	0	0	7	6	2	8	0	0
Oenothera wolfii Wolf's evening-primrose	G2 S1	None None	Rare Plant Rank - 1B.1 BLM_S-Sensitive SB_BerrySB-Berry Seed Bank	10 25	29 S:2	0	0	0	0	0	2	1	1	2	0	0
Oncorhynchus clarkii clarkii coast cutthroat trout	G4T4 S3	None None	AFS_VU-Vulnerable CDFW_SSC-Species of Special Concern USFS_S-Sensitive	5 317	45 S:16	0	0	1	0	0	15	10	6	16	0	0
Oncorhynchus kisutch pop. 2 coho salmon - southern Oregon / northern California ESU	G4T2Q S2?	Threatened Threatened	AFS_TH-Threatened	35 117	10 S:6	0	0	2	0	0	4	1	5	6	0	0
Oncorhynchus mykiss irideus pop. 16 steelhead - northern California DPS	G5T2T3Q S2S3	Threatened None	AFS_TH-Threatened	35 117	12 S:4	0	1	1	0	0	2	0	4	4	0	0
Pandion haliaetus osprey	G5 S4	None None	CDF_S-Sensitive CDFW_WL-Watch List IUCN_LC-Least Concern	10 1,240	500 S:80	14	25	7	2	1	31	70	10	79	1	0
Pekania pennanti fisher - West Coast DPS	G5T2T3Q S2S3	None Threatened	BLM_S-Sensitive CDFW_SSC-Species of Special Concern USFS_S-Sensitive	182 319	738 S:2	0	0	0	0	0	2	0	2	2	0	0
Phalacrocorax auritus double-crested cormorant	G5 S4	None None	CDFW_WL-Watch List IUCN_LC-Least Concern	10 10	39 S:1	0	0	0	0	0	1	1	0	1	0	0

Summary Table Report

California Department of Fish and Wildlife

California Natural Diversity Database

Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks						Population Status		Presence		
						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Puccinellia pumila dwarf alkali grass	G4? SH	None None	Rare Plant Rank - 2B.2	15 15	2 S:1	0	0	0	0	0	1	1	0	1	0	0
Rallus obsoletus obsoletus California Ridgway's rail	G5T1 S1	Endangered Endangered	CDFW_FP-Fully Protected NABCI_RWL-Red Watch List		99 S:2	0	0	0	0	2	0	2	0	0	0	0
Rana aurora northern red-legged frog	G4 S3	None None	CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern USFS_S-Sensitive	5 800	290 S:56	0	3	0	1	0	52	11	45	56	0	0
Rana boylii foothill yellow-legged frog	G3 S3	None Candidate Threatened	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_NT-Near Threatened USFS_S-Sensitive	7 2,100	2304 S:9	2	1	0	0	0	6	2	7	9	0	0
Rhyacotriton variegatus southern torrent salamander	G3G4 S2S3	None None	CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern USFS_S-Sensitive	200 1,200	415 S:8	0	0	1	0	0	7	4	4	8	0	0
Riparia riparia bank swallow	G5 S2	None Threatened	BLM_S-Sensitive IUCN_LC-Least Concern	50 114	298 S:3	0	1	0	0	0	2	2	1	3	0	0
Sidalcea malachroides maple-leaved checkerbloom	G3 S3	None None	Rare Plant Rank - 4.2	100 1,650	136 S:26	2	4	7	10	0	3	2	24	26	0	0
Sidalcea malviflora ssp. patula Siskiyou checkerbloom	G5T2 S2	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive	50 300	49 S:5	0	0	2	0	0	3	2	3	5	0	0
Sidalcea oregana ssp. eximia coast checkerbloom	G5T1 S1	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive	20 200	19 S:5	0	0	2	0	0	3	2	3	5	0	0
Silene scouleri ssp. scouleri Scouler's catchfly	G5T4T5 S2S3	None None	Rare Plant Rank - 2B.2		23 S:1	0	0	0	0	0	1	1	0	1	0	0
Sitka Spruce Forest Sitka Spruce Forest	G1 S1.1	None None		160 160	4 S:1	0	0	1	0	0	0	1	0	1	0	0
Spergularia canadensis var. occidentalis western sand-spurrey	G5T4 S1	None None	Rare Plant Rank - 2B.1	5 10	4 S:4	0	0	1	0	0	3	3	1	4	0	0

Summary Table Report

California Department of Fish and Wildlife

California Natural Diversity Database

Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks						Population Status		Presence		
						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Spirinchus thaleichthys longfin smelt	G5 S1	Candidate Threatened	CDFW_SSC-Species of Special Concern	0 10	46 S:6	0	0	0	0	0	6	5	1	6	0	0
Thaleichthys pacificus eulachon	G5 S3	Threatened None			10 S:2	0	0	0	0	1	1	2	0	1	1	0
Trichodon cylindricus cylindrical trichodon	G4 S2	None None	Rare Plant Rank - 2B.2		14 S:1	0	0	0	0	0	1	1	0	1	0	0
Usnea longissima Methuselah's beard lichen	G4 S4	None None	Rare Plant Rank - 4.2 BLM_S-Sensitive	520 2,100	206 S:16	0	3	1	6	0	6	0	16	16	0	0
Viola palustris alpine marsh violet	G5 S1S2	None None	Rare Plant Rank - 2B.2	100 100	10 S:2	0	0	0	0	0	2	2	0	2	0	0

CNPS California Native Plant Society

Inventory of Rare and Endangered Plants

Plant List

47 matches found. *Click on scientific name for details*

Search Criteria

Found in Quads 4012482, 4012481, 4012472, 4012471, 4012463 4012462 and 4012461;

Modify Search Criteria | Export to Excel | Modify Columns | Modify Sort | Remove Photos

Scientific Name	Common Name	Family	Lifeform	Blooming Period	CA Rare Plant Rank	State Rank	Global Rank	Photo
Abronia umbellata var. breviflora	pink sand-verbena	Nyctaginaceae	perennial herb	Jun-Oct	1B.1	S2	G4G5T2	 2009 Jorg & Mimi Fleige
Angelica lucida	sea-watch	Apiaceae	perennial herb	May-Sep	4.2	S3	G5	 2013 Dana York
Astragalus pycnostachyus var. pycnostachyus	coastal marsh milk-vetch	Fabaceae	perennial herb	(Apr)Jun-Oct	1B.2	S2	G2T2	 2009 Neal Kramer
Astragalus rattanii var. rattanii	Rattan's milk-vetch	Fabaceae	perennial herb	Apr-Jul	4.3	S4	G4T4	no photo available
Bryoria pseudocapillaris	false gray horsehair lichen	Parmeliaceae	fruticose lichen (epiphytic)		3.2	S2	G3	no photo available
Bryoria spiralifera	twisted horsehair	Parmeliaceae	fruticose lichen (epiphytic)		1B.1	S1S2	G3	no photo available

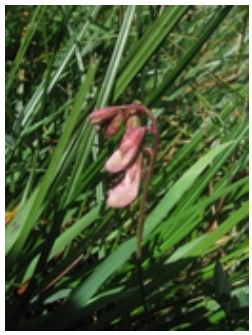
	lichen							
Cardamine angulata	seaside bittercress	Brassicaceae	perennial herb	(Jan)Mar-Jul	2B.2	S3	G4G5	 2015 Dana York
Carex arcta	northern clustered sedge	Cyperaceae	perennial herb	Jun-Sep	2B.2	S1	G5	 2006 Dean Wm. Taylor
Carex leptalea	bristle-stalked sedge	Cyperaceae	perennial rhizomatous herb	Mar-Jul	2B.2	S1	G5	 2003 Steve Matson
Carex lyngbyei	Lyngbye's sedge	Cyperaceae	perennial rhizomatous herb	Apr-Aug	2B.2	S3	G5	 2010 Dana York
Carex praticola	northern meadow sedge	Cyperaceae	perennial herb	May-Jul	2B.2	S2	G5	 2013 Scot Loring
Castilleja ambigua var. humboldtiensis	Humboldt Bay owl's-clover	Orobanchaceae	annual herb (hemiparasitic)	Apr-Aug	1B.2	S2	G4T2	

								 2005 Doreen L. Smith
Castilleja litoralis	Oregon coast paintbrush	Orobanchaceae	perennial herb (hemiparasitic)	Jun-Jul	2B.2	S3	G3	 2012 Gary A. Monroe
Chloropyron maritimum ssp. palustre	Point Reyes bird's-beak	Orobanchaceae	annual herb (hemiparasitic)	Jun-Oct	1B.2	S2	G4?T2	 2013 Robert Sikora
Chrysosplenium glechomifolium	Pacific golden saxifrage	Saxifragaceae	perennial herb	Feb-Jun(Jul)	4.3	S3	G5	no photo available
Collinsia corymbosa	round-headed Chinese-houses	Plantaginaceae	annual herb	Apr-Jun	1B.2	S1	G1	 2007 Steve Matson
Erysimum menziesii	Menzies' wallflower	Brassicaceae	perennial herb	Mar-Sep	1B.1	S1	G1	 2004 Bob Huettmann
Erythronium revolutum	coast fawn lily	Liliaceae	perennial bulbiferous herb	Mar-Jul(Aug)	2B.2	S3	G4G5	

								 2009 Jim Maloney
Fissidens pauperculus	minute pocket moss	Fissidentaceae	moss		1B.2	S2	G3?	no photo available
Gilia capitata ssp. pacifica	Pacific gilia	Polemoniaceae	annual herb	Apr-Aug	1B.2	S2	G5T3	 2012 Asa Spade
Gilia millefoliata	dark-eyed gilia	Polemoniaceae	annual herb	Apr-Jul	1B.2	S2	G2	 2005 Doreen L. Smith
Glehnia littoralis ssp. leiocarpa	American glehnia	Apiaceae	perennial herb	May-Aug	4.2	S3	G5T4	 2013 Dana York
Hesperevax sparsiflora var. brevifolia	short-leaved evax	Asteraceae	annual herb	Mar-Jun	1B.2	S2	G4T3	 2006 Doreen L. Smith
Lasthenia californica ssp. macrantha	perennial goldfields	Asteraceae	perennial herb	Jan-Nov	1B.2	S2	G3T2	 2003 Doreen L. Smith
Lathyrus japonicus	seaside pea	Fabaceae	perennial rhizomatous herb	May-Aug	2B.1	S2	G5	


1998 Nick Kurzenko

Lathyrus palustris	marsh pea	Fabaceae	perennial herb	Mar-Aug	2B.2	S2	G5


2015 Aaron Arthur

Layia carnosa	beach layia	Asteraceae	annual herb	Mar-Jul	1B.1	S2	G2


2007 Aaron Schusteff

Lilium kelloggii	Kellogg's lily	Liliaceae	perennial bulbiferous herb	May-Aug	4.3	S3	G3


2014 John Doyen

Lilium occidentale	western lily	Liliaceae	perennial bulbiferous herb	Jun-Jul	1B.1	S1	G1


2000 John Game

Listera cordata	heart-leaved twayblade	Orchidaceae	perennial herb	Feb-Jul	4.2	S4	G5

								 2011 Jean Pawek
Lycopodium clavatum	running-pine	Lycopodiaceae	perennial rhizomatous herb	Jun-Aug(Sep)	4.1	S3	G5	 2008 Zoya Akulova
Mitellastra caulescens	leafy-stemmed mitrewort	Saxifragaceae	perennial rhizomatous herb	(Mar)Apr-Oct	4.2	S4	G5	 2002 N. Misa Ward and EDAW
Monotropa uniflora	ghost-pipe	Ericaceae	perennial herb (achlorophyllous)	Jun-Aug(Sep)	2B.2	S2	G5	 2005 Louis-M. Landry
Montia howellii	Howell's montia	Montiaceae	annual herb	(Jan-Feb)Mar-May	2B.2	S2	G3G4	 2008 Sierra Pacific Industries
Oenothera wolfii	Wolf's evening-primrose	Onagraceae	perennial herb	May-Oct	1B.1	S1	G2	

								 1995 Saint Mary's College of California
Pityopus californicus	California pinefoot	Ericaceae	perennial herb (achlorophyllous)	(Mar-Apr)May-Aug	4.2	S4	G4G5	 2015 Debra L. Cook
Pleuropogon refractus	nodding semaphore grass	Poaceae	perennial rhizomatous herb	(Mar)Apr-Aug	4.2	S4	G4	 2004 Dean Wm. Taylor
Puccinellia pumila	dwarf alkali grass	Poaceae	perennial herb	Jul	2B.2	SH	G4?	no photo available
Ribes laxiflorum	trailing black currant	Grossulariaceae	perennial deciduous shrub	Mar-Jul(Aug)	4.3	S3	G5?	 2010 Dana York
Sidalcea malachroides	maple-leaved checkerbloom	Malvaceae	perennial herb	(Mar)Apr-Aug	4.2	S3	G3	 2015 Adrienne Simmons

Sidalcea malviflora ssp. patula	Siskiyou checkerbloom	Malvaceae	perennial rhizomatous herb	(Apr)May-Aug	1B.2	S2	G5T2	 2005 Dean Wm. Taylor
Sidalcea oregana ssp. eximia	coast checkerbloom	Malvaceae	perennial herb	Jun-Aug	1B.2	S1	G5T1	no photo available
Silene scouleri ssp. scouleri	Scouler's catchfly	Caryophyllaceae	perennial herb	(Mar-May)Jun-Aug(Sep)	2B.2	S2S3	G5T5	no photo available
Spergularia canadensis var. occidentalis	western sand-spurrey	Caryophyllaceae	annual herb	Jun-Aug	2B.1	S1	G5T4	no photo available
Trichodon cylindricus	cylindrical trichodon	Ditrichaceae	moss		2B.2	S2	G4	no photo available
Usnea longissima	Methuselah's beard lichen	Parmeliaceae	fruticose lichen (epiphytic)		4.2	S4	G4	no photo available
Viola palustris	alpine marsh violet	Violaceae	perennial rhizomatous herb	Mar-Aug	2B.2	S1S2	G5	 2015 Trent M. Draper

Suggested Citation

California Native Plant Society, Rare Plant Program. 2018. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.39). Website http://www.rareplants.cnps.org [accessed 06 November 2018].

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The Calflora Database
The California Lichen Society
California Natural Diversity Database
The Jepson Flora Project
The Consortium of California Herbaria
CalPhotos

Questions and Comments
rareplants@cnps.org

Appendix C

Project Maps

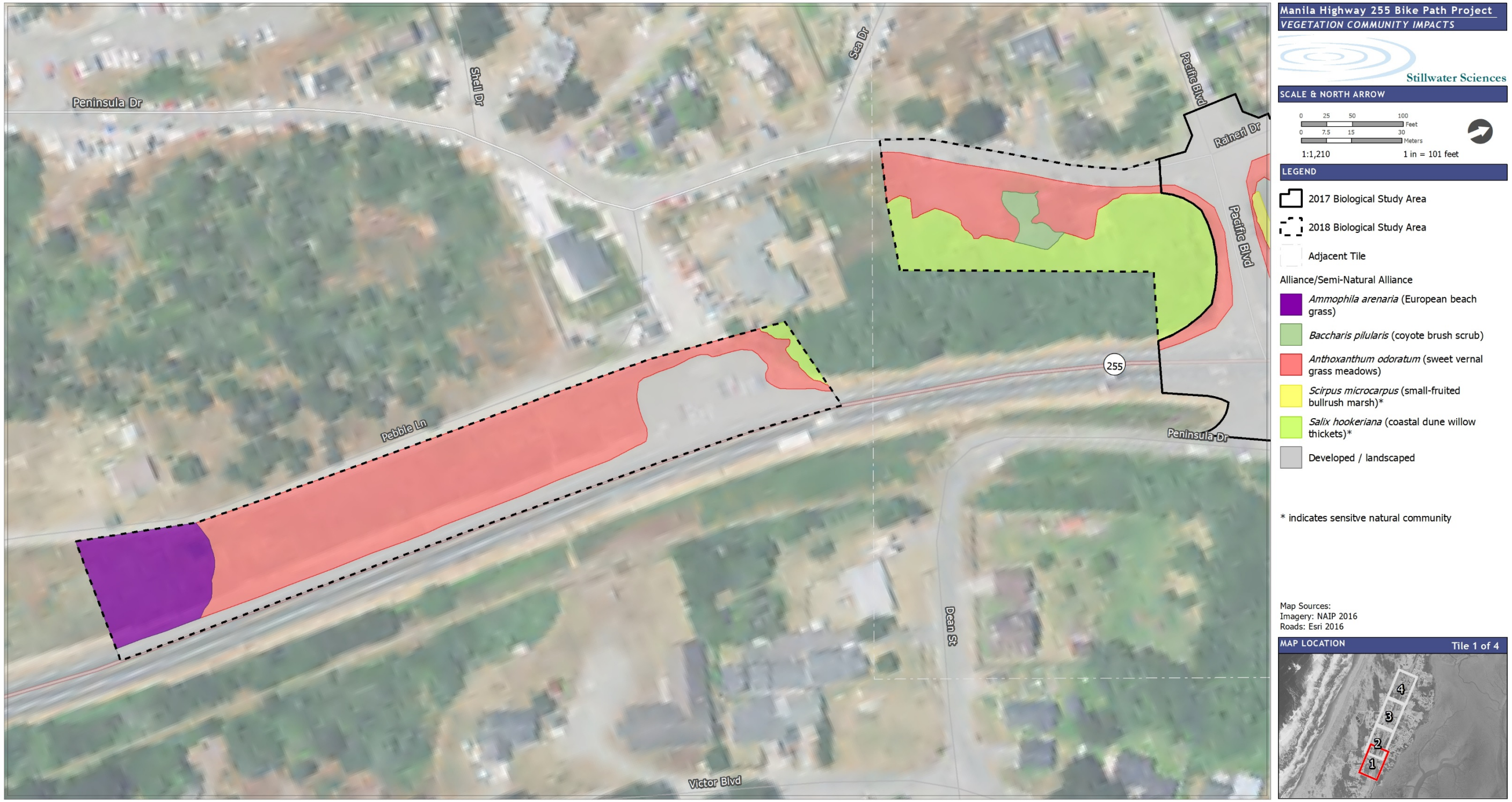


Figure C-1. Vegetation communities in the 2017 and 2018 BSAs. Tile 1 of 4.

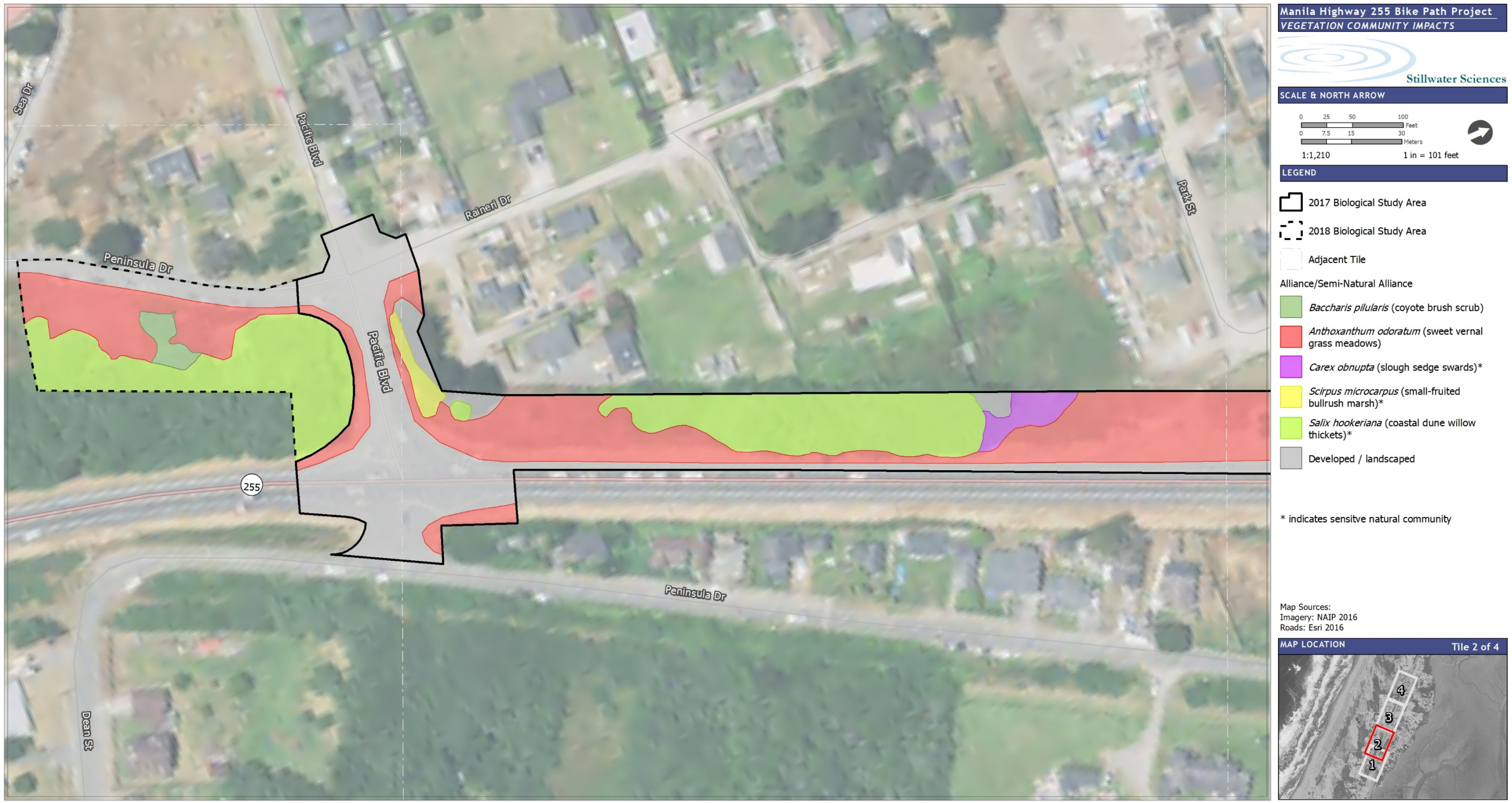


Figure C-2. Vegetation communities in the 2017 and 2018 BSAs. Tile 2 of 4.

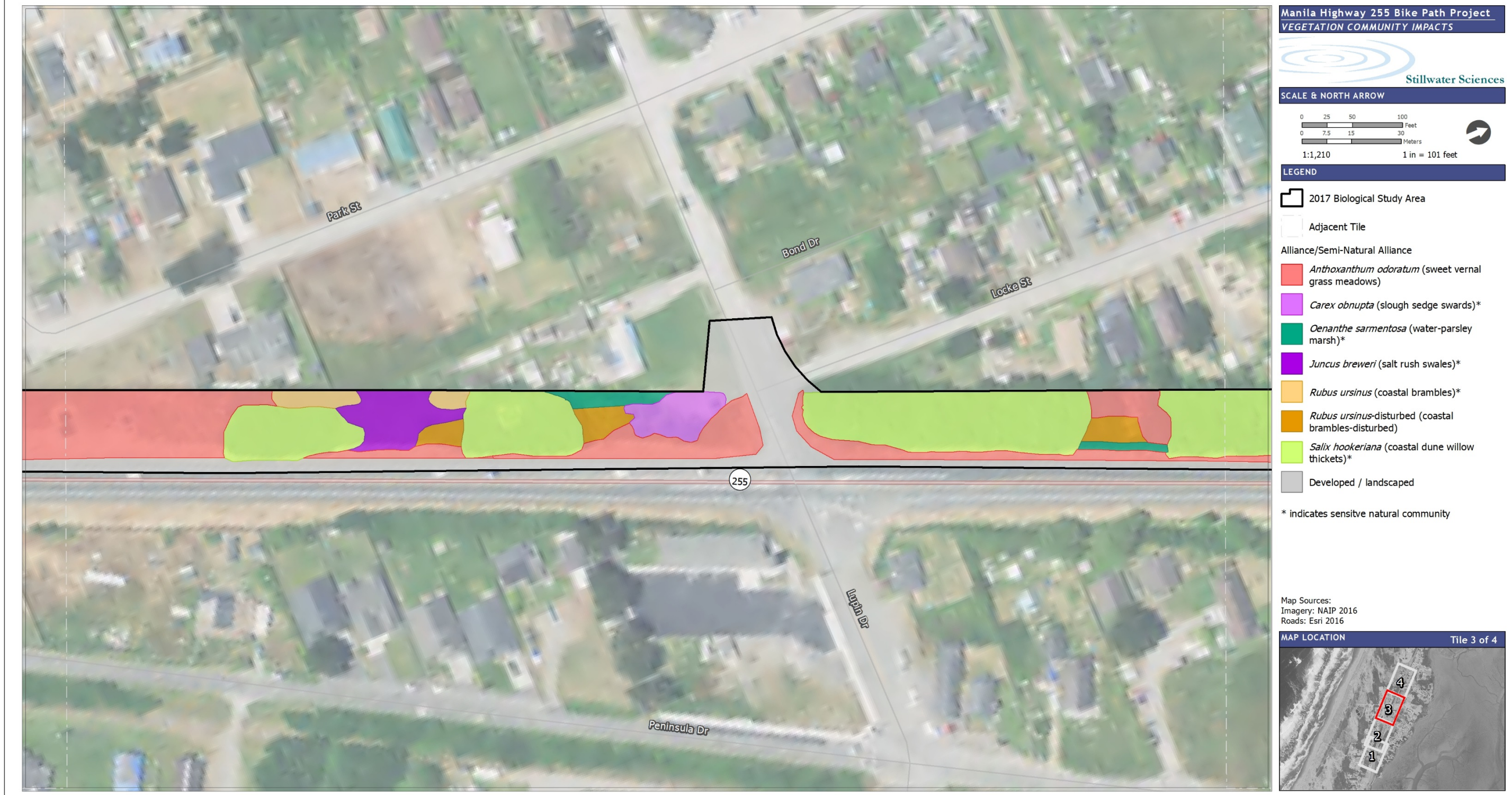


Figure C-3. Vegetation communities in the 2017 and 2018 BSAs. Tile 3 of 4.

Manila Highway 255 Bike Path Project
VEGETATION COMMUNITY IMPACTS

Stillwater Sciences

SCALE & NORTH ARROW

0 25 50 100 Feet
0 7.5 15 30 Meters

1:1,210 1 in = 101 feet

LEGEND

- 2017 Biological Study Area
- 2018 Biological Study Area
- Adjacent Tile

Alliance/Semi-Natural Alliance

- *Abronia latifolia - Ambrosia chamissonis* - disturbed (dune mat-disturbed)
- *Anthoxanthum odoratum* (sweet vernal grass meadows)
- *Carex obnupta* (slough sedge swards)*
- *Rubus ursinus* (coastal brambles)*
- *Rubus ursinus*-disturbed (coastal brambles-disturbed)
- *Salix hookeriana* (coastal dune willow thickets)*
- Developed / landscaped

* indicates sensitve natural community

Map Sources:
Imagery: NAIP 2016
Roads: Esri 2016

MAP LOCATION Tile 4 of 4

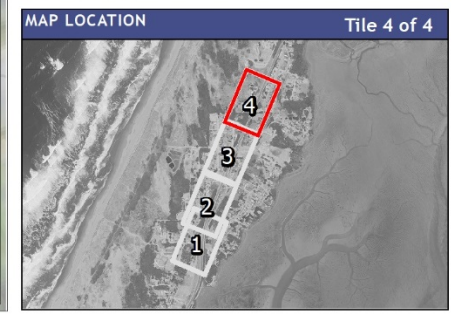


Figure C-4. Vegetation communities in the 2017 and 2018 BSAs. Tile 4 of 4.

Figure C-5. Sensitive natural communities and Project impacts in the 2017 and 2018 BSAs. Tile 1 of 4.

Figure C-6. Sensitive natural communities and Project impacts in the 2017 and 2018 BSAs. Tile 2 of 4.

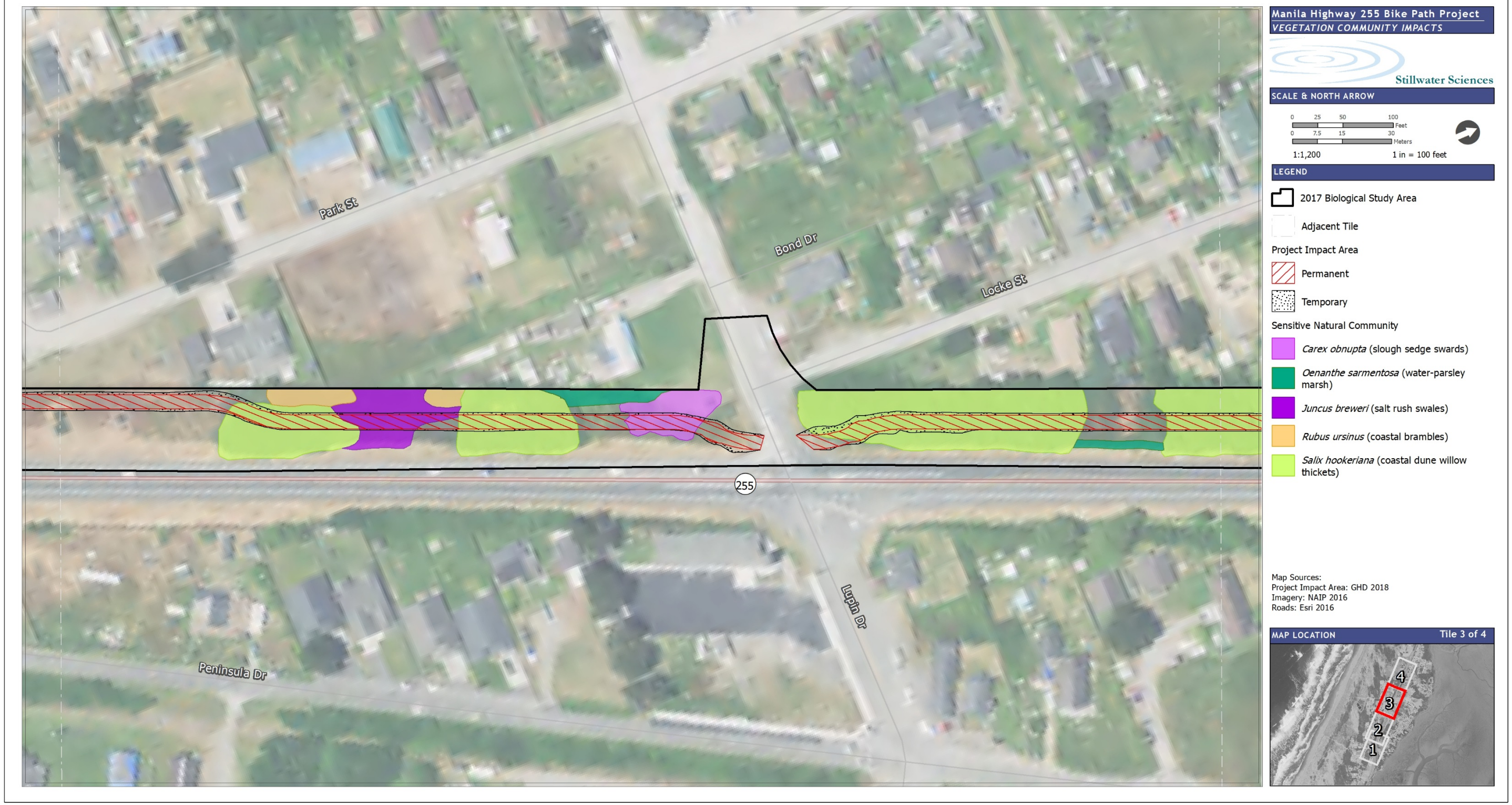


Figure C-7. Sensitive natural communities and Project impacts in the 2017 and 2018 BSAs. Tile 3 of 4.

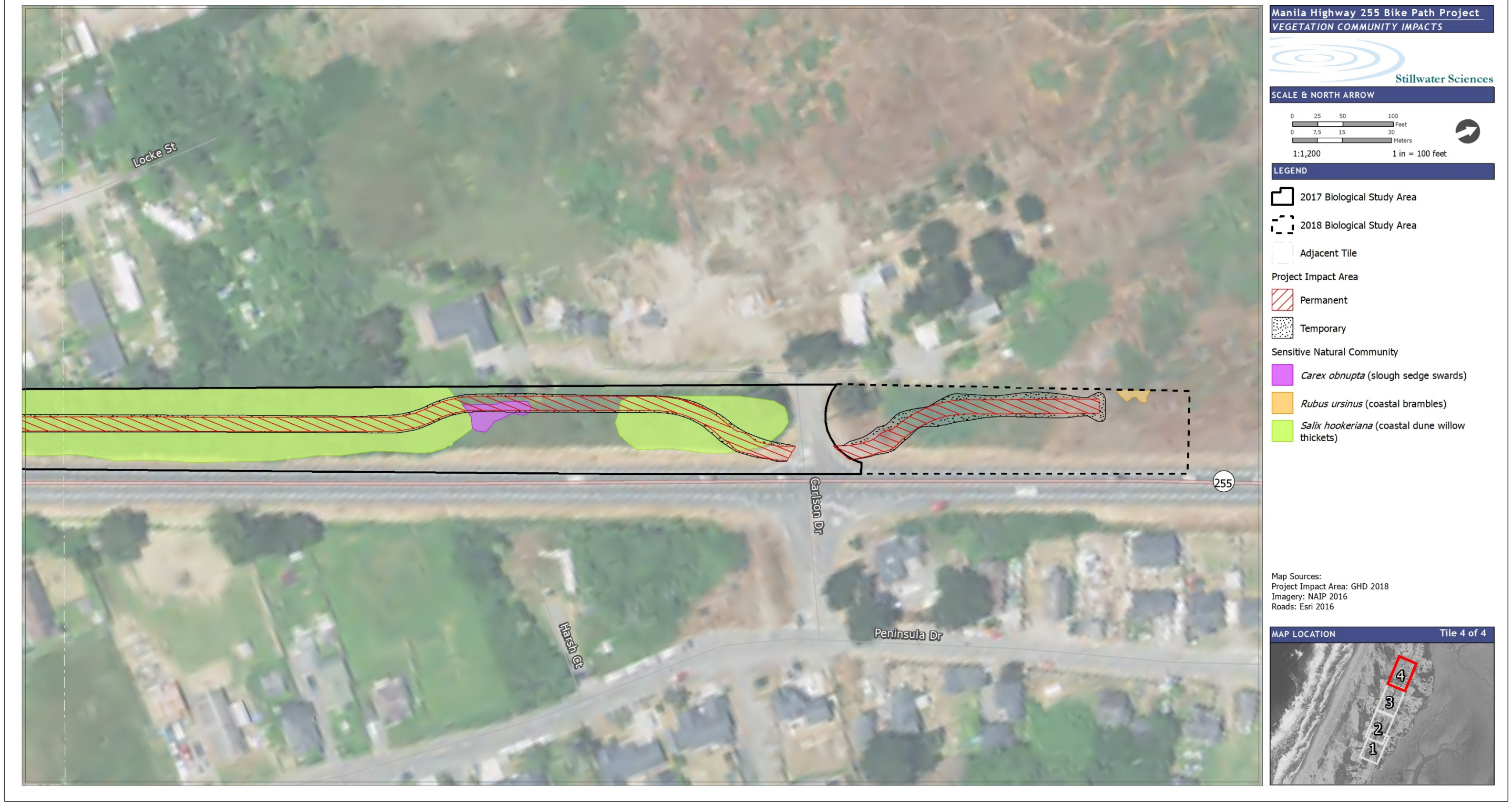


Figure C-8. Sensitive natural communities and Project impacts in the 2017 and 2018 BSAs. Tile 4 of 4.

Appendix E
90% Designs

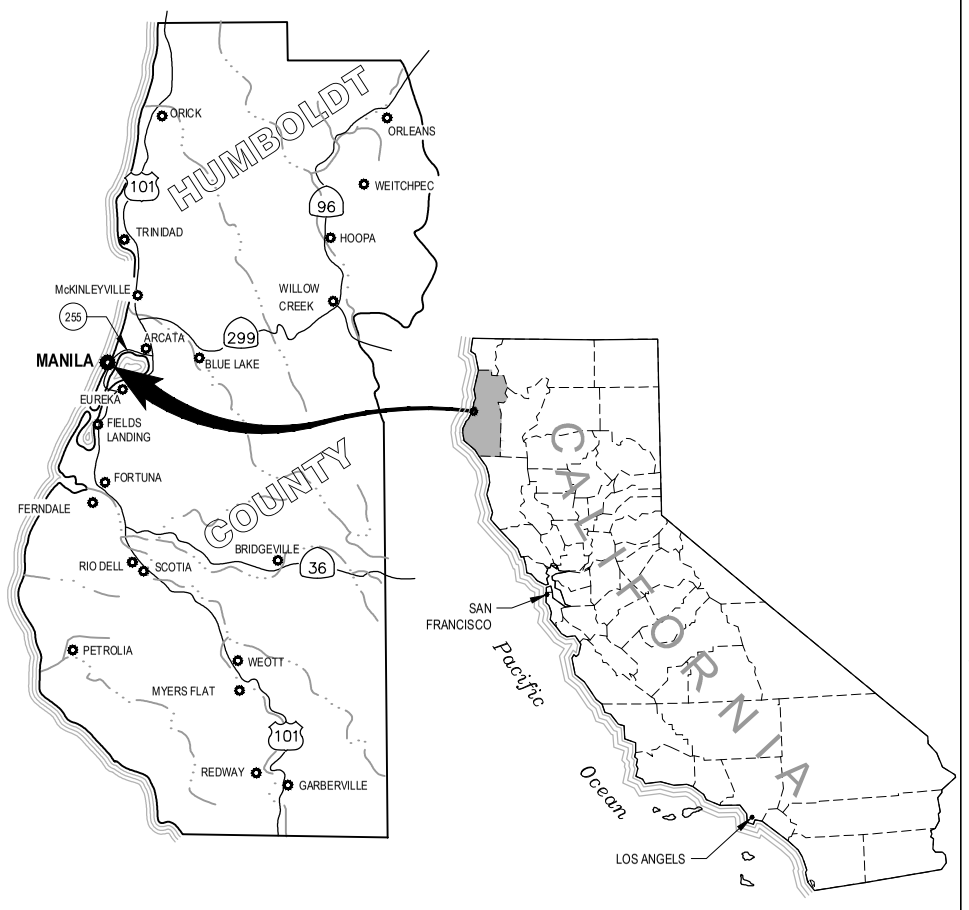
MANILA HIGHWAY 255 SHARED USE PATH

COUNTY OF HUMBOLDT

January 2020

October 7, 2021

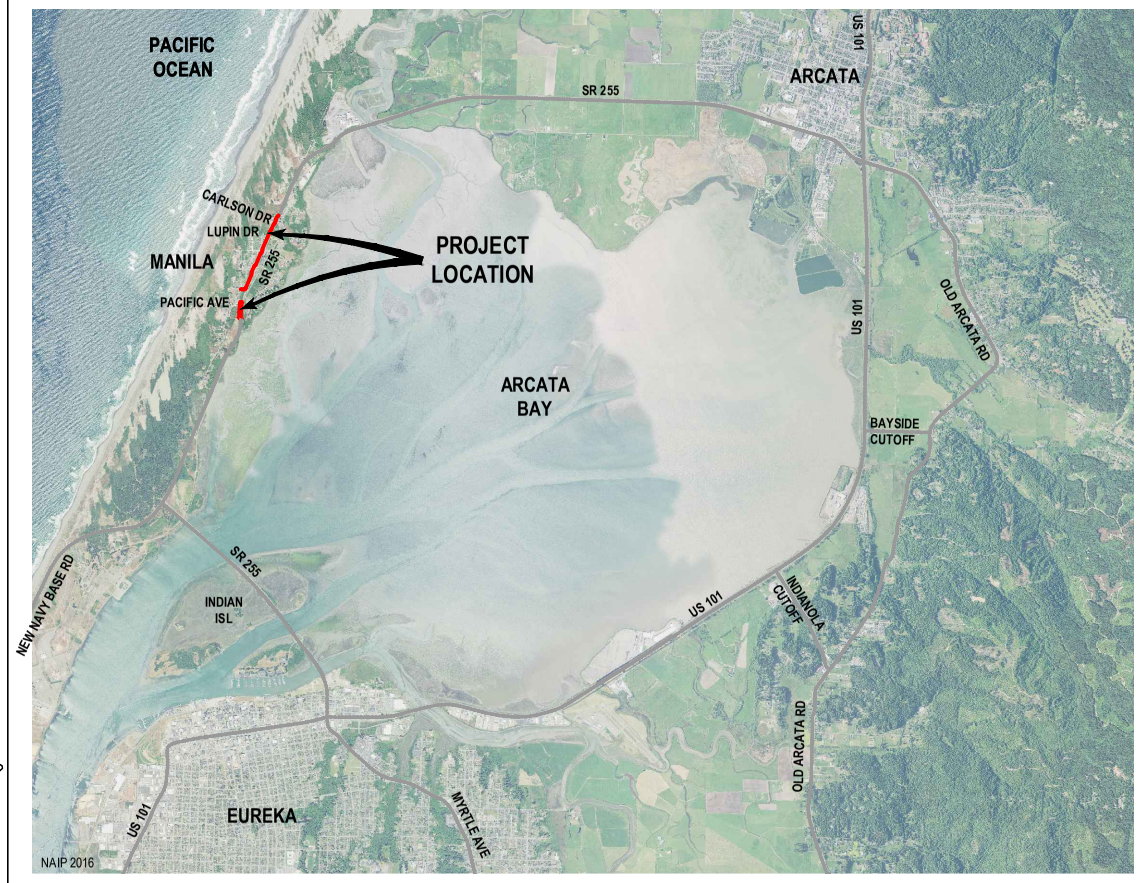
AREA MAP



N

NOT TO SCALE

LOCATION MAP



N

NOT TO SCALE

SHEET INDEX

APPROVED

HANK SEEMANN
DEPUTY OF PUBLIC WORKS - ENVIRONMENTAL SERVICES
COUNTY OF HUMBOLDT

DATE

PLN-2021-17402 Humboldt County Department of Public Works CDP

90% PLANS

NOT FOR CONSTRUCTION

Bar is one inch on original size sheet
0 1"

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Project Manager	J.WOLF	Date	1/30/2020
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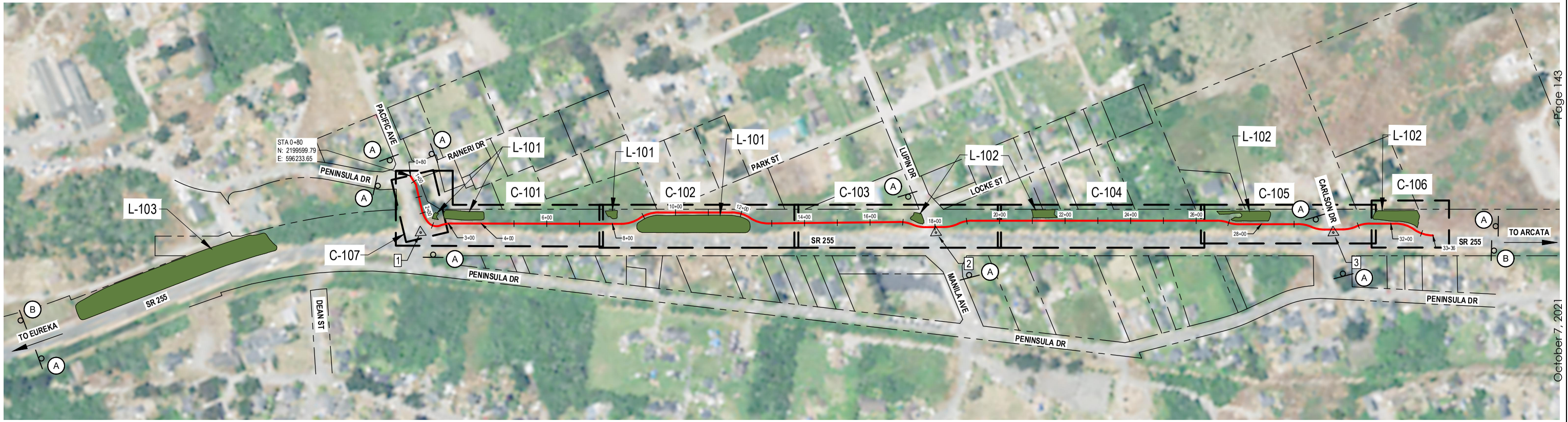
Client COUNTY OF HUMBOLDT
Project MANILA HIGHWAY 255 SHARED USE PATH
Title COVER SHEET
Project No. 11145210
Original Size ANSI D
Sheet No. G-001
Sheet 1 of 22



NOTE: CONSTRUCTION AREA SIGN SPACING NOT SHOWN TO SCALE

SHEET KEY MAP 0 150' 300'

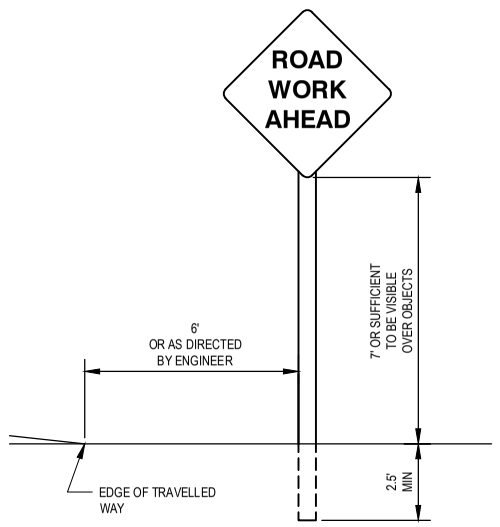
CONTROL POINT TABLE				
POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
1	2199558.67	5962504.11	20.68	CL MONUMENT WELL
2	2200997.87	5963137.12	19.65	2.5" BRASS DISK
3	2202107.85	5963625.37	20.99	CL MONUMENT WELL

LINE AND CURVE TABLE							
TAG		STATION	NORTHING	EASTING	BEARING	LENGTH	RADIUS
L1	BEGIN END	0+80.00 1+06.91	2199599.97 2199604.08	5962333.65 5962360.24	N81°13'25"E	26.91	
C1	BC EC	1+06.91 1+14.64	2199604.08 2199603.96	5962360.24 5962367.93	S89°09'00"E	7.729	23.00
L2	BEGIN END	1+14.64 1+90.36	2199603.96 2199590.19	5962367.93 5962442.39	S79°31'25"E	75.73	
C2	BC EC	1+90.36 2+33.83	2199590.19 2199592.49	5962442.39 5962485.40	N86°56'25"E	43.470	92.00
C3	BC EC	2+33.83 2+74.14	2199592.49 2199622.15	5962485.40 5962508.92	N38°24'31"E	40.312	33.00
C4	BC EC	2+74.14 3+09.81	2199622.15 2199656.63	5962508.92 5962517.28	N13°37'49"E	35.666	100.00
L3	BEGIN END	3+09.81 8+27.58	2199656.63 2200130.20	5962517.28 5962726.62	N23°50'52"E	517.77	
C5	BC EC	8+27.58 8+87.43	2200130.20 2200188.76	5962726.62 5962733.50	N06°42'07"E	59.851	100.00
C6	BC EC	8+87.43 9+47.10	2200188.76 2200247.15	5962733.50 5962740.30	N06°38'58"E	59.668	100.00
L4	BEGIN END	9+47.10 11+71.76	2200247.15 2200452.79	5962740.30 5962830.76	N23°44'35"E	224.66	

LINE AND CURVE TABLE							
TAG		STATION	NORTHING	EASTING	BEARING	LENGTH	RADIUS
C7	BC EC	11+71.76 12+30.38	2200452.79 2200496.71	5962830.76 5962868.32	N40°32'11"E	58.620	100.00
C8	BC EC	12+30.38 12+90.10	2200496.71 2200541.63	5962868.32 5962906.31	N40°13'19"E	59.717	100.00
L5	BEGIN END	12+90.10 16+89.24	2200541.63 2200908.73	5962906.31 5963063.00	N23°06'51"E	399.14	
C9	BC EC	16+89.24 17+30.42	2200908.73 2200942.26	5963063.00 5963086.40	N34°54'42"E	41.181	100.00
C10	BC EC	17+30.42 17+71.31	2200942.26 2200975.52	5963086.40 5963109.69	N34°59'44"E	40.888	100.00
L6	BEGIN END	17+71.31 18+27.90	2200975.52 2201027.51	5963109.69 5963132.06	N23°16'55"E	56.59	
C11	BC EC	18+27.90 18+71.50	2201027.51 2201070.00	5963132.06 5963140.15	N10°47'29"E	43.600	100.00
C12	BC EC	18+71.50 19+15.91	2201070.00 2201113.23	5963140.15 5963148.57	N11°01'19"E	44.405	100.00
L7	BEGIN END	19+15.91 26+63.89	2201113.23 2201797.90	5963148.57 5963449.74	N23°44'35"E	747.98	
C13	BC EC	26+63.89 26+96.91	2201797.90 2201825.41	5963449.74 5963467.74	N33°12'10"E	33.021	100.00

LINE AND CURVE TABLE							
TAG		STATION	NORTHING	EASTING	BEARING	LENGTH	RADIUS
C14	BC EC	26+96.91 27+30.13	2201825.41 2201853.09	5963467.74 5963485.82	N33°08'51"E	33.215	100.00
L8	BEGIN END	27+30.13 29+12.33	2201853.09 2202020.02	5963485.82 5963558.86	N23°37'56"E	182.21	
C15	BC EC	29+12.33 29+53.53	2202020.02 2202053.35	5963558.86 5963582.58	N35°26'07"E	41.201	100.00
C16	BC EC	29+53.53 29+95.47	2202053.35 2202087.35	5963582.58 5963606.59	N35°13'34"E	41.932	100.00
L9	BEGIN END	29+95.47 30+51.61	2202087.35 2202138.95	5963606.59 5963628.72	N23°12'49"E	56.15	
C17	BC EC	30+51.61 30+92.85	2202138.95 2202179.09	5963628.72 5963636.81	N11°23'57"E	41.240	100.00
C18	BC EC	30+92.85 31+35.02	2202179.09 2202220.08	5963636.81 5963645.27	N11°39'50"E	42.164	100.00
L10	BEGIN END	31+35.02 32+13.84	2202220.08 2202292.24	5963645.27 5963677.01	N23°44'35"E	78.83	
C19	BC EC	32+13.84 32+74.80	2202292.24 2202337.39	5963677.01 5963716.54	N41°12'17"E	60.953	100.00
C20	BC EC	32+74.80 33+35.66	2202337.39 2202382.46	5963716.54 5963756.04	N41°13'48"E	60.865	100.00

NOTE:
SEE PLAN AND PROFILE SHEETS FOR CORRESPONDING CALL-OUTS FOR THESE LINE AND CURVE TABLES.



TYPICAL STATIONARY CONSTRUCTION AREA SIGNS

CONSTRUCTION SIGN NOTES:

1. ALL TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE CALIFORNIA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (CAMUTCD) AND CALTRANS 2018 STANDARD PLANS.
2. SIGN SPACING PER CALIFORNIA MUTCD.
3. EXACT SIGN LOCATIONS AND POSITIONS TO BE APPROVED BY THE ENGINEER.
4. ALL WARNING SIGNS SHALL HAVE A BLACK LEGEND AND BORDER ON ORANGE BACKGROUND.
5. ALTERNATIVE POST CONFIGURATION TO BE APPROVED BY ENGINEER.
6. MAINTAIN ALL SIGNS THROUGHOUT DURATION OF CONSTRUCTION.
7. PROVIDE FLAGGERS AS REQUIRED TO ACCOMMODATE CONSTRUCTION.

STATIONARY MOUNTED CONSTRUCTION AREA SIGNS					
SIGN LABEL	SIGN CODE	PANEL SIZE	SIGN MESSAGE	NUMBER & POST SIZE	NO. OF SIGNS
A	W20-1	36"x36"	ROAD WORK AHEAD	(1) 4"x4"	10
B	G20-2	36"x18"	END ROAD WORK	(1) 4"x4"	2

LEGEND

- TRAIL AND SIDEWALK ALIGNMENT
- WETLAND CREATION AREAS

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Project MANILA HIGHWAY 255 SHARED USE PATH
Title SHEET KEY - SURVEY CONTROL - LINE CURVE TABLE
Project No. 11145210
Original Size ANSI D
Sheet No. G-002
Sheet 2 of 22

PLN-2021-17402 Humboldt County Department of Public Works CDP
October 7, 2021
Page 143

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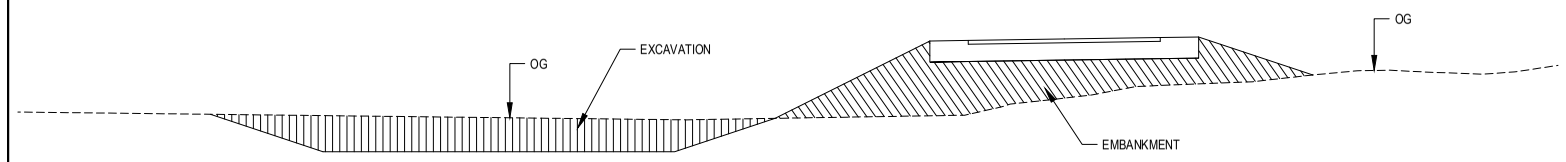

PAY LIMITS

NOT TO SCALE

ITEM NO.	ITEM CODE		ITEM DESCRIPTION	UNIT	TOTAL QUANTITY
1	50000		Construction Surveys	LS	1
2	70030		Lead Compliance Plan	LS	1
3	120090		Construction Area Signs	LS	1
4	120100		Traffic Control System	LS	1
5	130100		Job Site Management	LS	1
6	130610		Temporary Check Dam	LF	200
7	130640		Temporary Fiber Roll	LF	4500
8	130680		Temporary Silt Fence	LF	4500
9	130900		Temporary Concrete Washout	LS	1
10	170103		Clearing and Grubbing (LS)	LS	1
11	190101	F	Roadway Excavation	CY	7123
12	198010	F	Imported Borrow (CY)	CY	1895
13	198050	F	Embankment	CY	1895
14	204008		Plant (Group H)	EA	119
15	204020		Plant (Group P)	EA	1861
16	204035		Plant (Group A)	EA	22
17	210212		Dry Seed (SQFT)	SQFT	43560
18	210280		Rolled Erosion Control Product (Blanket)	SQFT	21300
19	210300		Hydromulch	SQFT	43560
20	210420		Straw	SQFT	43560
21	210431		Hydroseed (Trail Embankment)	SQFT	21300
22	260203		Class 2 Aggregate Base (CY)	CY	905
23	390132		Hot Mix Asphalt (Type A)	TON	820
24	510057	F	Structural Concrete, Sidewalk Retaining Footing	SQFT	202
25	510055	F	Structural Concrete, Boardwalk	CY	23
26	641114		24" Plastic Pipe (HDPE Type S)	LF	45
27	703235		Sidewalk Underdrain	EA	1
28	705315		24" Alternative Flared End Section	EA	2
29	723085		Rock Slope Protection (60 lb, Class II, Method B) (TON)	TON	10
30	730011		Minor Concrete (A1-6 Curb) (LF)	LF	215
31	730012		Minor Concrete (6" Warning Curb) (LF)	LF	267
32	730070		Detectable Warning Surface	SQFT	226
33	731522		Minor Concrete (Sidewalk) (SF)	SQFT	1267
34	731624		Minor Concrete (Curb Ramp) (SF)	SQFT	368
35	750503		Removable Metal Bollard	EA	4
36	760015		Remove Piezometer	EA	8
37	760100		Piezometer	EA	8
38	800321		Chain Link Fence (Type CL-4, Vinyl-Clad)	LF	120
39	820590		Relocate Roadside Sign-One Post	EA	4
40	820840		Roadside Sign - One-Post	EA	13
41	820855		Roadside Sign - Two-Post (Interpretative Sign)	EA	1
42	840504		4" Thermoplastic Traffic Stripe	LF	350
43	840505		6" Thermoplastic Traffic Stripe	LF	430
44	840515		Thermoplastic Pavement Marking	SQFT	680
45	846035		Remove Thermoplastic Pavement Marking	SQFT	470
46	870200		Lighting System	LS	1
47	999990		Mobilization	LS	1

QUANTITIES

NOT TO SCALE

SIGN SCHEDULE

LOCATION (STA)	OFFSET	SIGN CODE	SIGN MESSAGE / DESCRIPTION	PANEL SIZE (L" x H")
2+57.50	6' RT	R1-1	STOP	18" x 18"
3+11	10' RT	R5-3	NO MOTOR VEHICLES	24" x 24"
3+73	10' LT	M4-6	END	24" x 12"
		D11-1	BIKE ROUTE	24" x 18"
8+66	17' RT	CUSTOM	INTERPRETIVE	36" x 24"
17+35	10' LT	R5-3	NO MOTOR VEHICLES	24" x 24"
17+67	10' RT	R1-1	STOP	18" x 18"
18+29	8' LT	R1-1	STOP	18" x 18"
18+67	10' RT	R5-3	NO MOTOR VEHICLES	24" x 24"
29+00	10' RT	M4-6	END	24" x 12"
		D11-1	BIKE ROUTE	24" x 18"
29+58	10' LT	R5-3	NO MOTOR VEHICLES	24" x 24"
29+88	10' RT	R1-1	STOP	18" x 18"
30+60	7' LT	R1-1	STOP	18" x 18"
30+91	7' RT	R5-3	NO MOTOR VEHICLES	24" x 24"
33+08	10' LT	R5-3	NO MOTOR VEHICLES	24" x 24"

SIGN RELOCATION SCHEDULE

RELOCATE FROM (STA)	RELOCATE TO (STA / OFFSET)	SIGN CODE	SIGN MESSAGE / DESCRIPTION	PANEL SIZE (L" x H")
1+17	1+12 / 5' LT		MANILA DUNES COMMUNITY CENTER	
1+77	1+77 / 5' LT	R2-1	SPEED LIMIT 25 MPH	
17+70	17+76 / 10' LT	R1-1	STOP	36" x 36"
32+81	33+00 / 11 ' RT	CANT FIND :(	HAZARD ZONE	

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Client COUNTY OF HUMBOLDT

Project MANILA HIGHWAY 255 SHARED USE PATH

Title SUMMARY OF QUANTITIES AND PAY LIMITS

Project No. 11145210

Original Size ANSI D

Sheet No. G-003

Sheet 3 of 22

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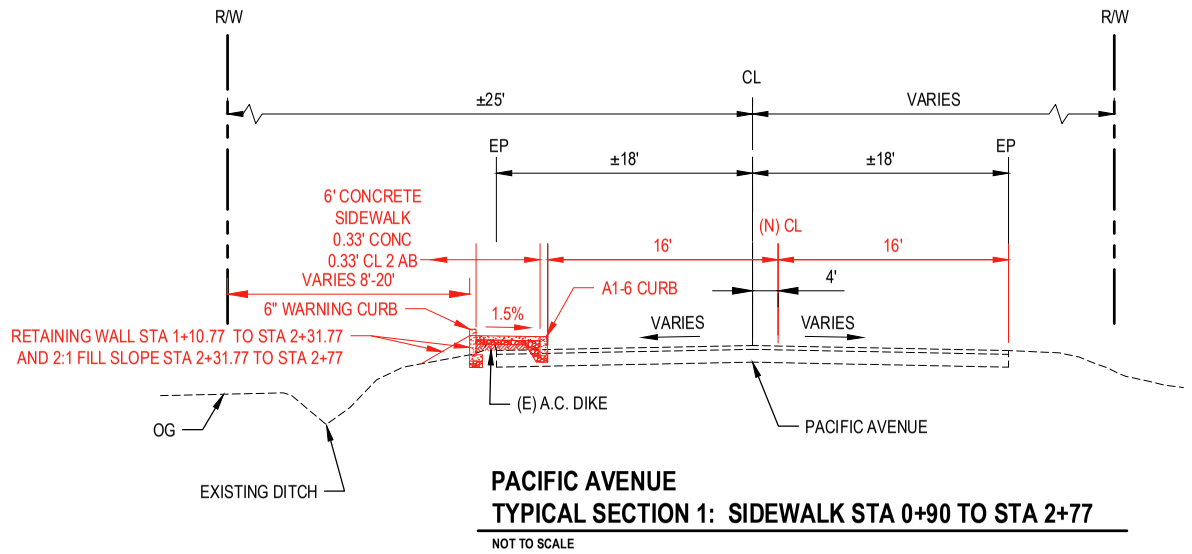

PACIFIC AVENUE
TYPICAL SECTION 1: SIDEWALK STA 0+90 TO STA 2+77

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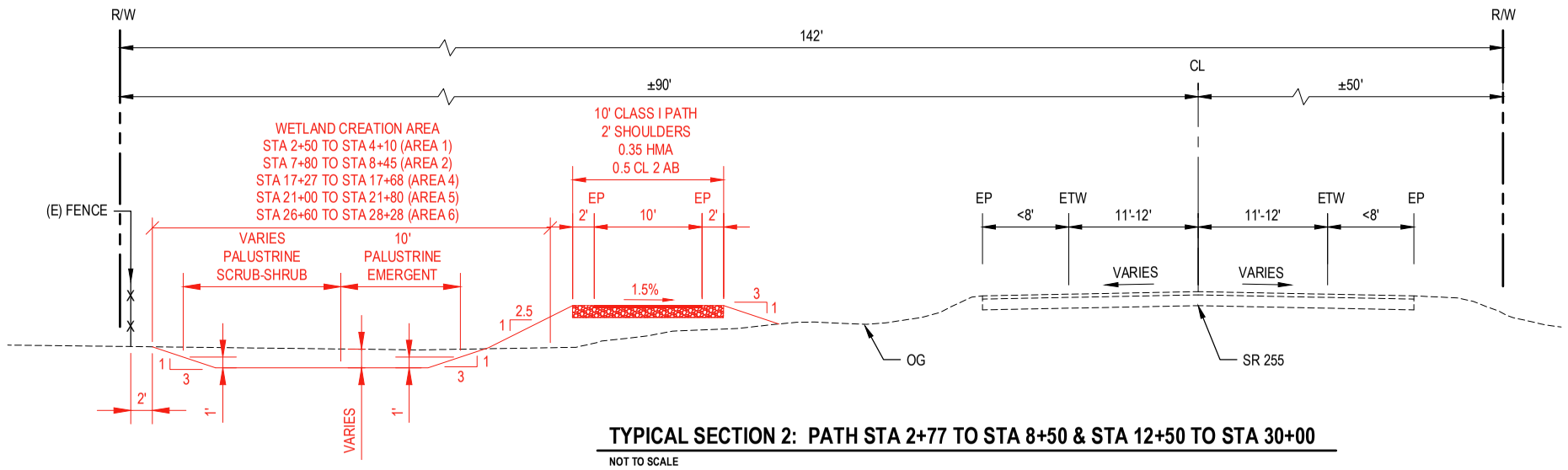

TYPICAL SECTION 2: PATH STA 2+77 TO STA 8+50 & STA 12+50 TO STA 30+00

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Project MANILA HIGHWAY 255 SHARED USE PATH
Title TYPICAL SECTIONS
Project No. 11145210
Original Size ANSI D
Sheet No. G-004
Sheet 4 of 22

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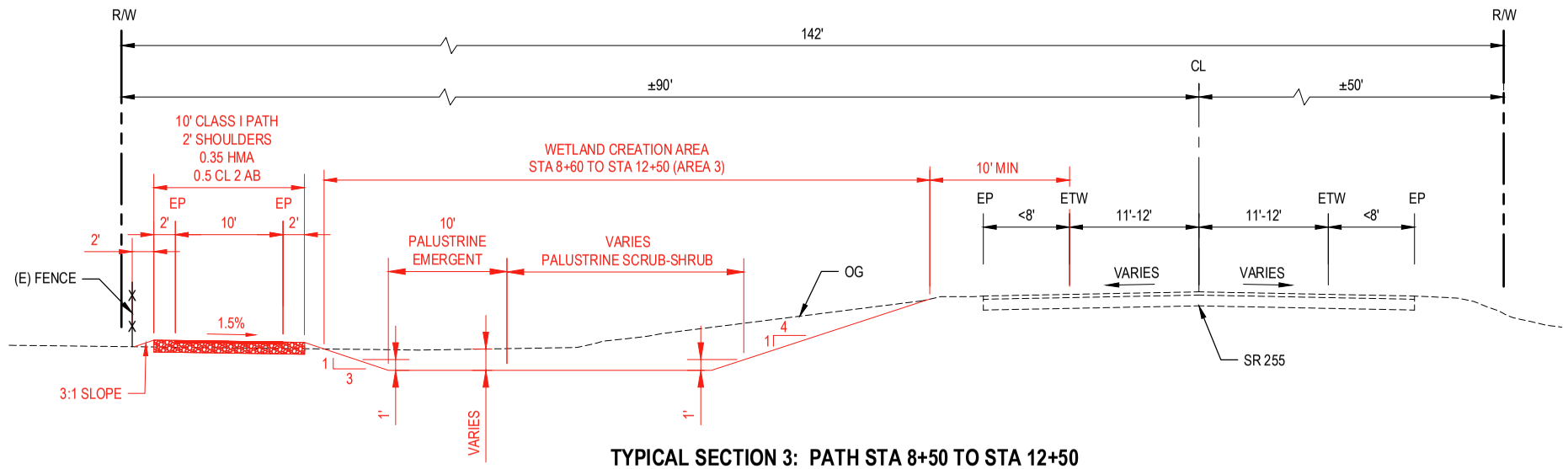

TYPICAL SECTION 3: PATH STA 8+50 TO STA 12+50

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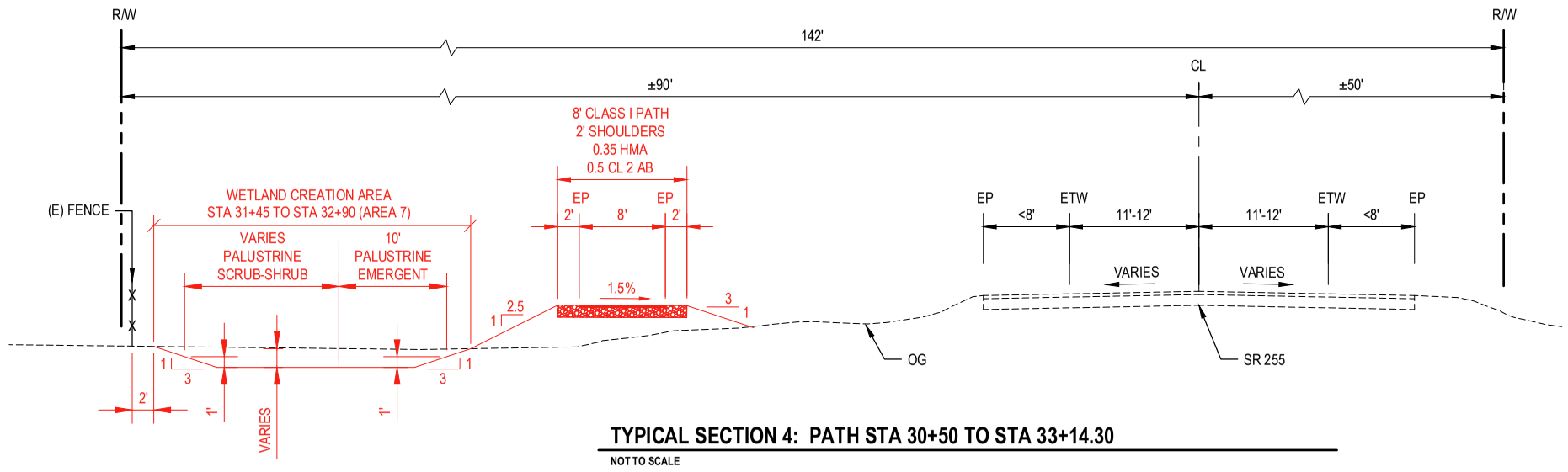

TYPICAL SECTION 4: PATH STA 30+50 TO STA 33+14.30

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Project MANILA HIGHWAY 255 SHARED USE PATH
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Project No. 11145210
Original Size ANSI D
Sheet No. G-005
Sheet 5 of 22

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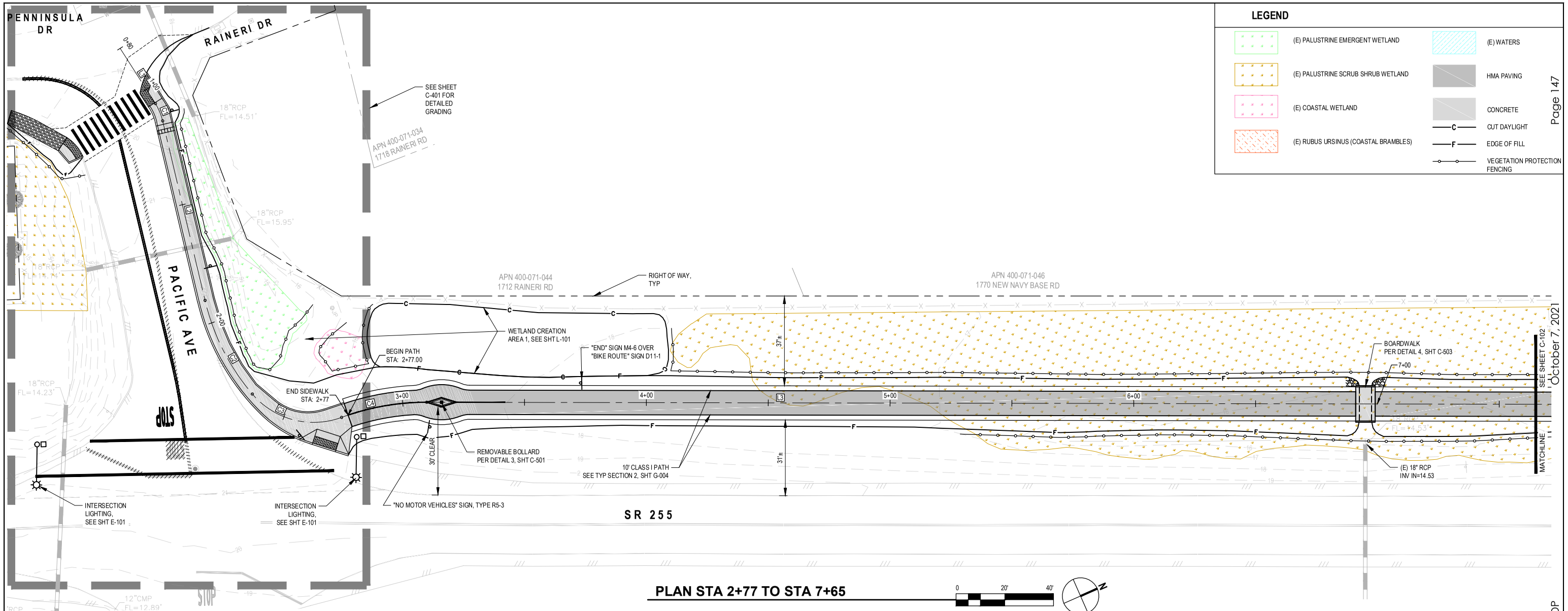
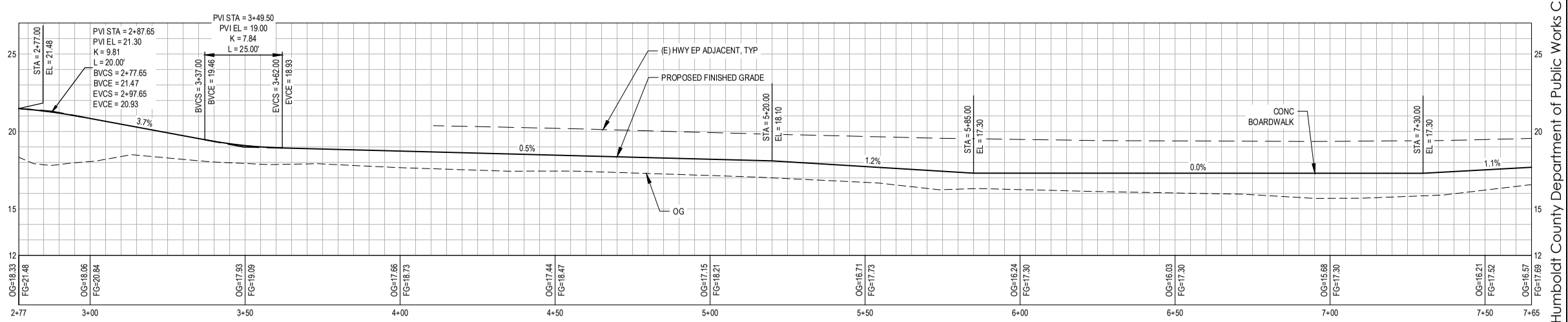


PLAN STA 2+77 TO STA 7+65

0 20' 40'



PROFILE STA 2+77 TO STA 7+65

0 20' 40' HORIZONTAL

0 4' 8' VERTICAL

Page 147

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PLN-2021-17402 Humboldt County Department of Public Works CDP

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Project MANILA HIGHWAY 255 SHARED USE PATH

Title PATH PLAN & PROFILE STA 2+77 TO STA 7+65

Project No. 11145210

Original Size ANSI D

Sheet No. C-101

Sheet 6 of 22

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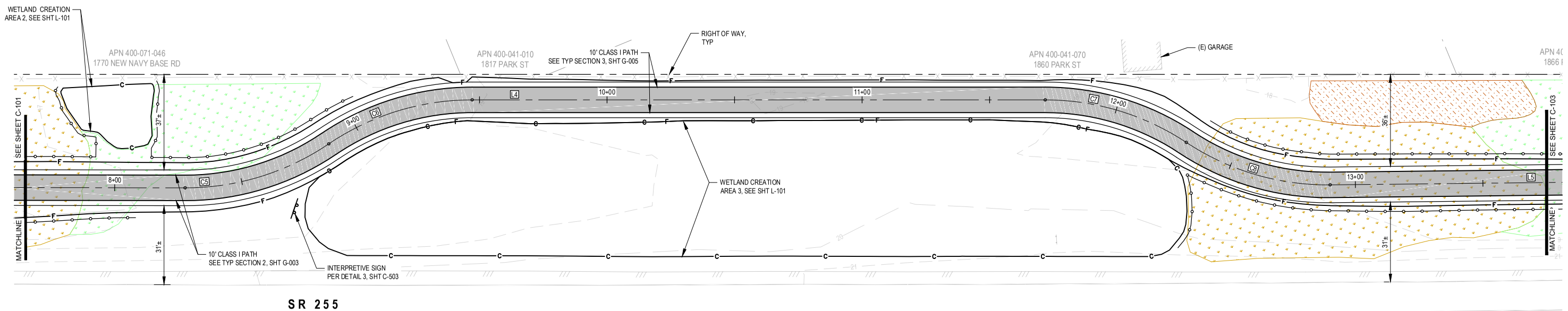
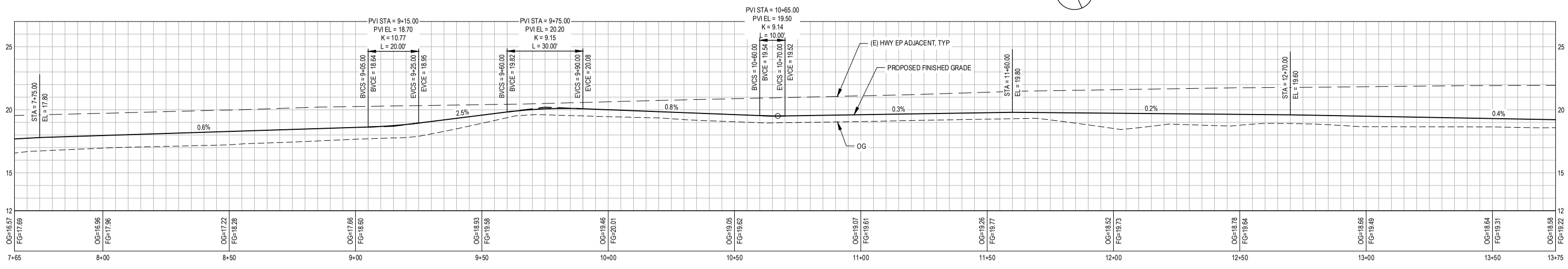
LEGEND

- (E) PALUSTRINE EMERGENT WETLAND
- (E) PALUSTRINE SCRUB SHRUB WETLAND
- (E) COASTAL WETLAND
- (E) RUBUS URSINUS (COASTAL BRAMBLES)
- (E) WATERS
- HMA PAVING
- CONCRETE
- C — CUT DAYLIGHT
- F — EDGE OF FILL
- VEGETATION PROTECTION FENCING



PLAN STA 7+65 TO STA 13+75

0 20' 40'



PROFILE STA 7+65 TO STA 13+75

0 20' 40' HORIZONTAL

0 4' 8' VERTICAL

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Project MANILA HIGHWAY 255 SHARED USE PATH

Title PATH PLAN & PROFILE STA 7+65 TO STA 13+75

Project No. 11145210

Original Size ANSI D

Sheet No. C-102

Sheet 7 of 22

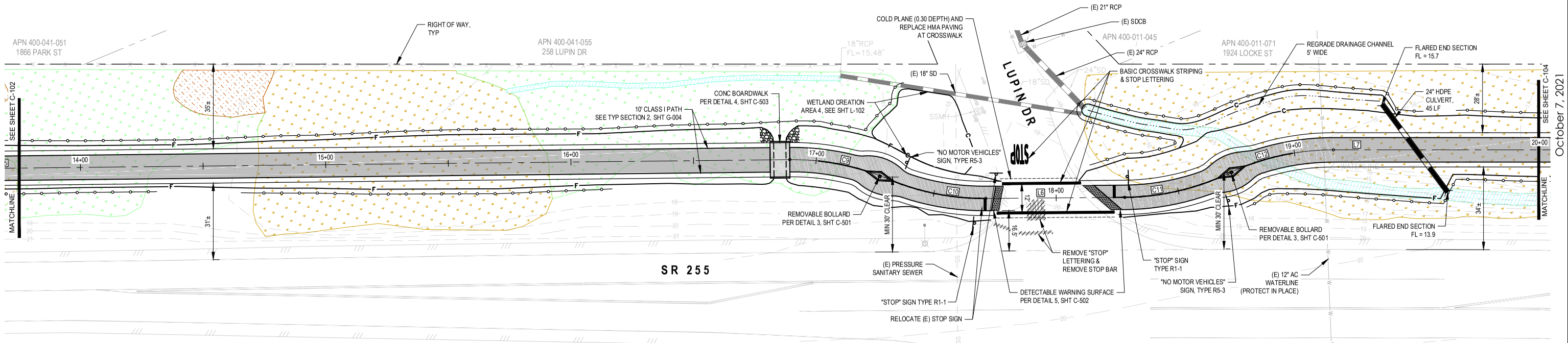
October 7, 2021

PLN-2021-17402 Humboldt County Department of Public Works CDP

Plot Date: 30 January 2020 - 3:18 PM Plotted By: Owen Goode Filename: \\ghdnet\ghd\US\Eureka\Projects\111\11145210 Manila Hwy 255 Trail\06-CAD\Sheets\11145210_05-11_C101-107.dwg

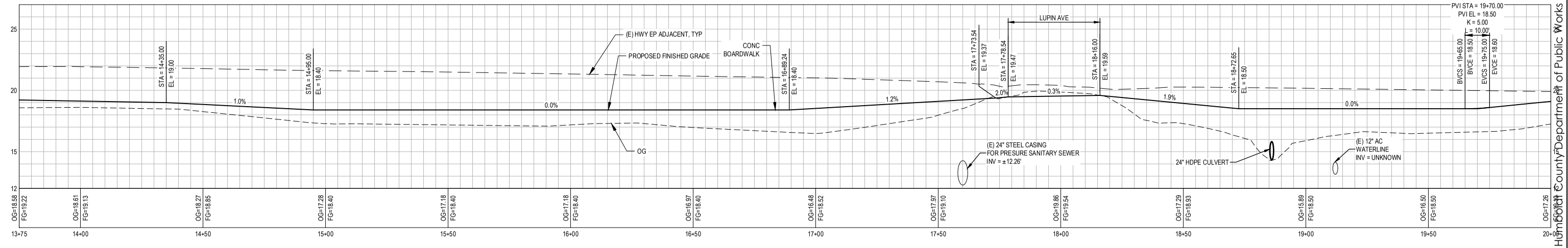
LEGEND

- (E) PALUSTRINE EMERGENT WETLAND
- (E) PALUSTRINE SCRUB SHRUB WETLAND
- (E) COASTAL WETLAND
- (E) RUBUS URSINUS (COASTAL BRAMBLES)
- (E) WATERS
- HMA PAVING
- CONCRETE
- C — CUT DAYLIGHT
- F — EDGE OF FILL
- VEGETATION PROTECTION FENCING



PLAN STA 13+75 TO STA 20+00

0 20' 40'



PROFILE STA 13+75 TO STA 20+00

0 20' 40' HORIZONTAL

0 4' 8' VERTICAL

90% PLANS

NOT FOR CONSTRUCTION

Bar is one inch on original size sheet

0 1"

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Drafting Check	J.WOLF	Design Check	J.WOLF
Project Manager	J.WOLF	Date	1/30/2020
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Client COUNTY OF HUMBOLDT

Project MANILA HIGHWAY 255 SHARED USE PATH

Title PATH PLAN & PROFILE STA 13+75 TO STA 20+00

Project No. 11145210

Original Size ANSI D

Sheet No. C-103

Sheet 8 of 22

October 7, 2021

PLN-2021-17402 Humboldt County Department of Public Works CDP

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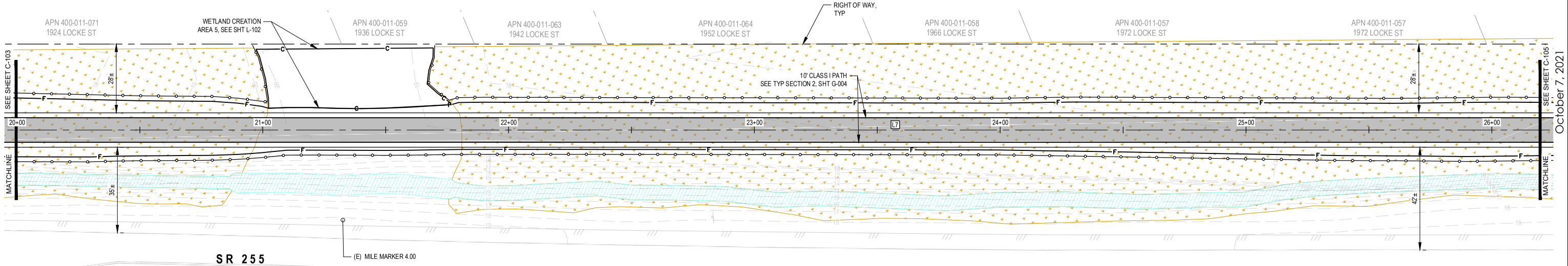
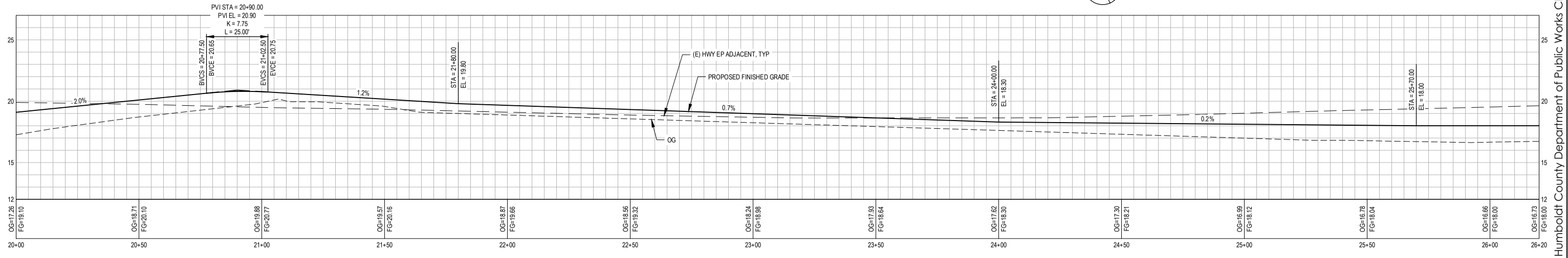


PLAN STA 20+00 TO STA 26+20

0 20' 40'



PROFILE STA 20+00 TO STA 26+20

0 20' 40' HORIZONTAL

0 4' 8' VERTICAL

90% PLANS
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Client COUNTY OF HUMBOLDT
Project MANILA HIGHWAY 255 SHARED USE PATH
Title PATH PLAN & PROFILE STA 20+00 TO STA 26+20

Project No. 11145210
Original Size ANSI D
Sheet No. C-104
Sheet 9 of 22

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October 7, 2021

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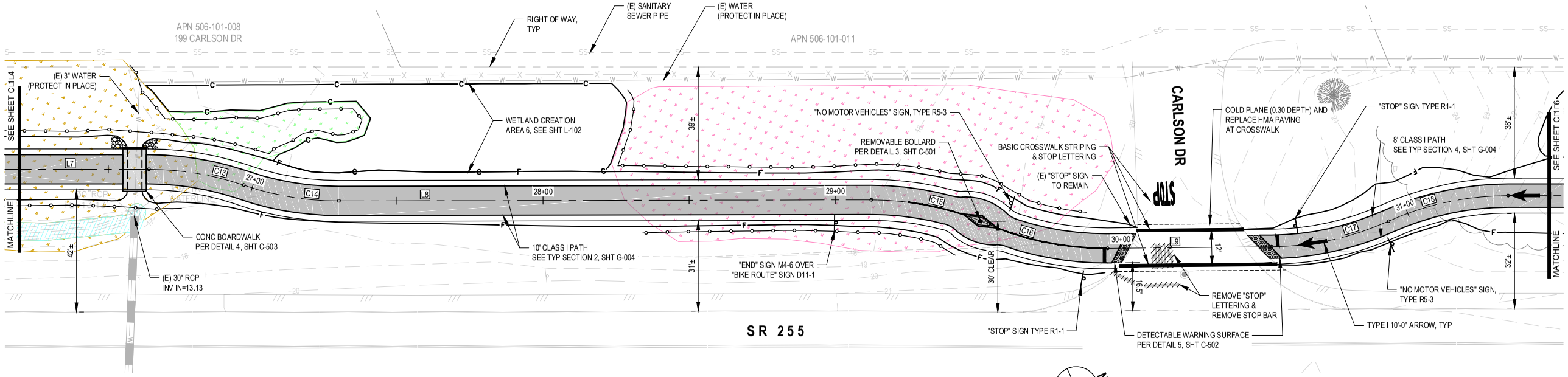
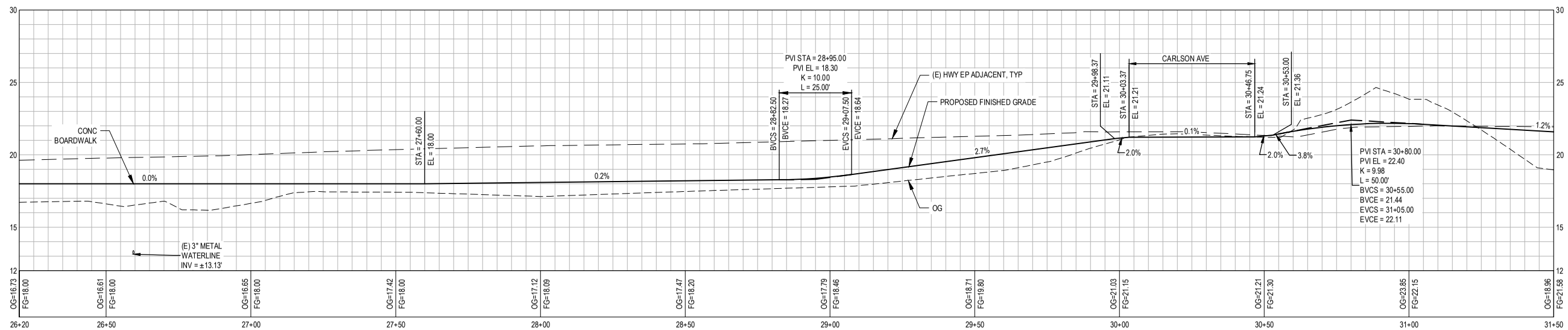


PATH STA 26+20 TO STA 31+50

0 20' 40'

N



PROFILE STA 26+20 TO STA 31+50

0 20' 40' HORIZONTAL

0 4' 8' VERTICAL

90% PLANS
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0 1"

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Client **COUNTY OF HUMBOLDT**
Project **MANILA HIGHWAY 255 SHARED USE PATH**
Title **PATH PLAN & PROFILE STA 26+20 TO STA 31+50**
Project No. **11145210**
Original Size **ANSI D**
Sheet No. **C-105**
Sheet **10** of **22**

Plot Date: 28 April 2020 - 4:36 PM
Plotted By: Owen Goode
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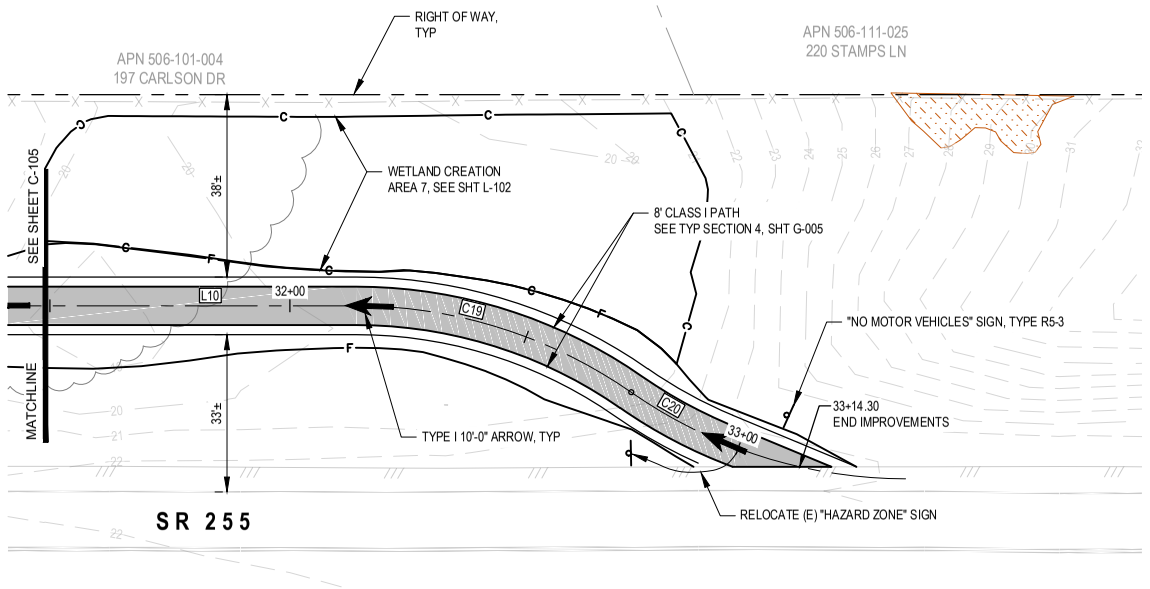
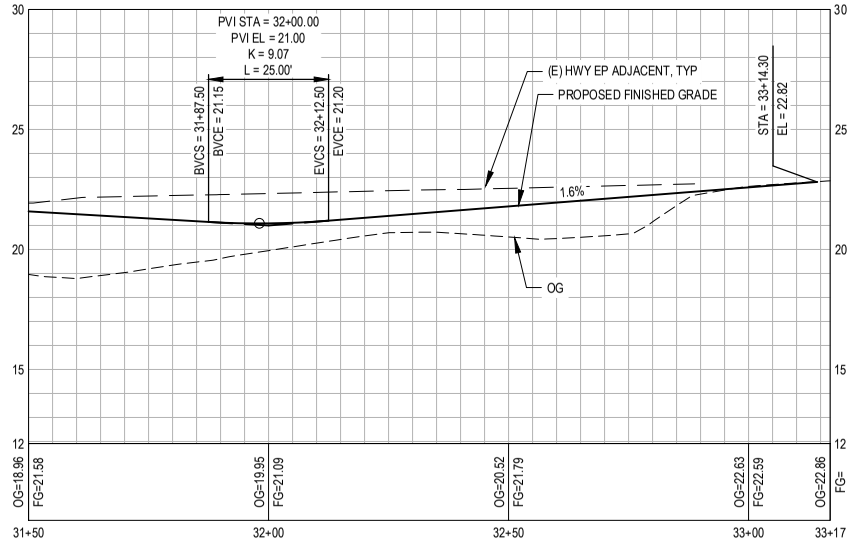


PATH STA 31+50 TO STA 33+14.30

0 20' 40'



PROFILE STA 31+50 TO STA 33+14.30

0 20' 40' HORIZONTAL

0 4' 8' VERTICAL

90% PLANS

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Client COUNTY OF HUMBOLDT

Project MANILA HIGHWAY 255 SHARED USE PATH

Title PATH PLAN & PROFILE STA 31+50 TO STA 33+14.30

Project No. 11145210

Original Size ANSI D

Sheet No. C-106

Sheet 11 of 22

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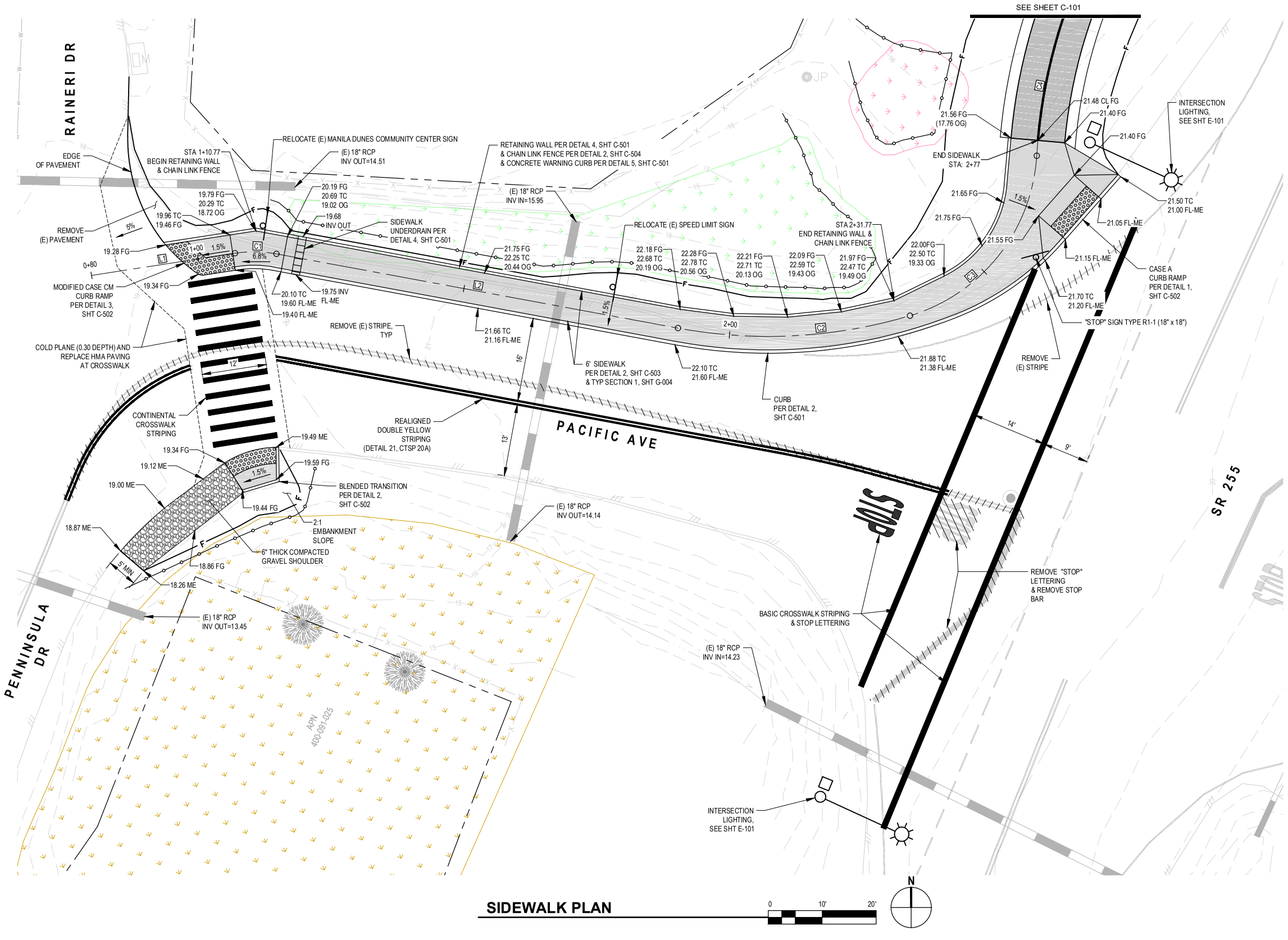
October 7, 2021

PLN-2021-17402 Humboldt County Department of Public Works CDP



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- VEGETATION PROTECTION FENCING

ABBREVIATIONS (TO SUPPLEMENT CALTRANS 2018 STD PLAN A3A)

TC	TOP OF CURB
FL-ME	FLOWLINE - MATCH EXISTING
CTSP	2018 CALTRANS STANDARD PLAN

October 7, 2021

PLN-2021-17402 Humboldt County Department of Public Works CDP

90% PLANS

NOT FOR CONSTRUCTION

COUNTY OF HUMBOLDT — The Home of the Redwoods

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0 1"

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Project Manager	J.WOLF	Date	1/30/2020
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Client COUNTY OF HUMBOLDT
Project MANILA HIGHWAY 255 SHARED USE PATH
Title SIDEWALK PLAN

Project No. 11145210

Original Size ANSI D

Sheet No. C-401

Sheet 12 of 22

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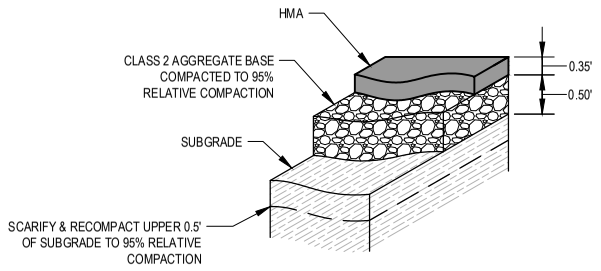
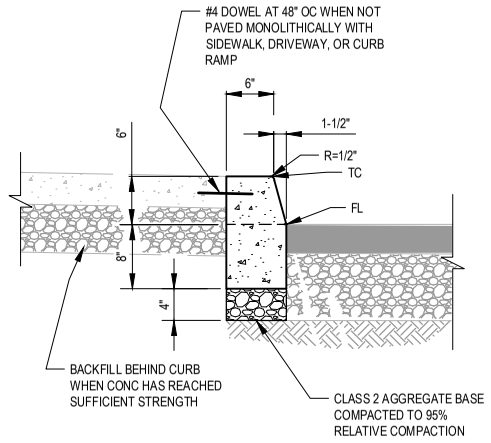


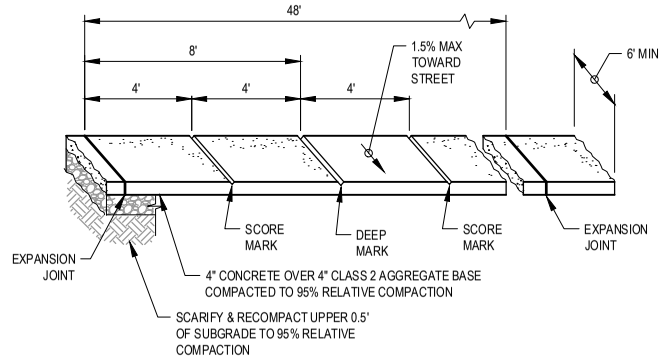
1 C-501 **TYPICAL PAVEMENT SECTION**
SCALE: NTS



NOTES:

1. DRILL AND DOWEL (2) #4'S WHEN JOINING EXISTING CURBS.

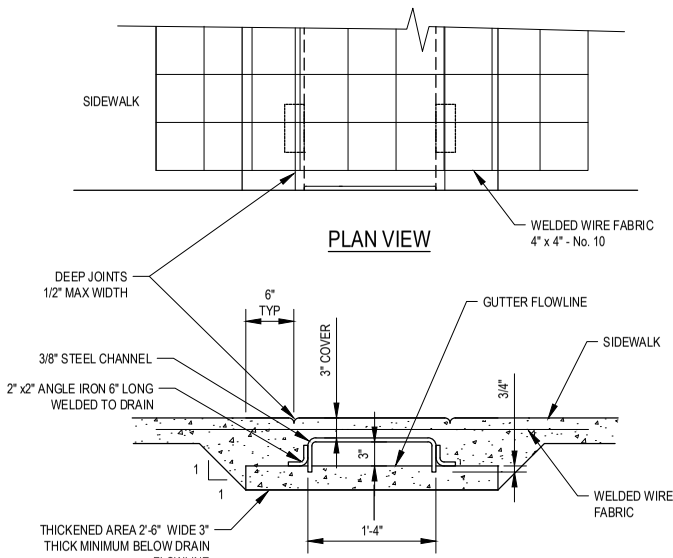
2 C-501 **TYPICAL CURB DETAIL - TYPE A1-6**
SCALE: NTS



NOTES:

1. DEEP SCORE MARK OR WEAKENED PLANE-DEPTH EQUAL TO 3/4".
2. EXPANSION JOINT MATERIAL TO BE 1/4" THICK PREMOLDED JOINT FILLER FULL THICKNESS OF CONCRETE. EXPANSION JOINTS TO ALIGN WITH EXPANSION JOINTS IN CURB & GUTTER.
3. SIDEWALK SHALL BE BROOM FINISHED, DIRECTION OF BROOMING SHALL BE PERPENDICULAR TO DIRECTION OF TRAVEL.
4. CONTRACTOR TO DRILL AND DOWEL #4'S AT 24" O.C. INTO EXISTING SIDEWALK AT JUNCTIONS TO EXISTING SIDEWALK, DRIVEWAY CURB, AND / OR GUTTER.
5. PROVIDE THICKENED EDGE (8" THICK BY 6" WIDE) WHEN FLUSH WITH VEHICULAR AREAS.
6. WIDTH OF SCORE MARK TO BE 1/2" MAX.

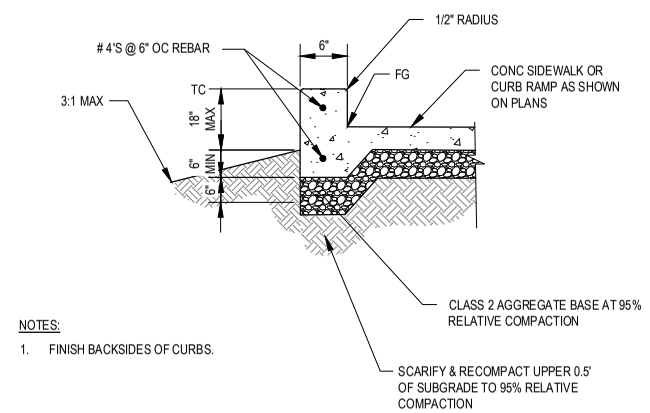
3 C-501 **TYPICAL SIDEWALK DETAIL**
SCALE: NTS



NOTES:

1. BOTTOM OF DRAIN SHALL BE SLOPED AT 1% MIN. AWAY FROM THE ROAD GUTTER AND SHALL BE SMOOTHED PRIOR TO SETTING CHANNEL IN WET CONCRETE.
2. AFTER SETTING CHANNEL, THICKENED AREA WILL BE ALLOWED TO SET UP ENOUGH TO PREVENT FURTHER SINKING OF CHANNEL. A COLD JOINT IS ACCEPTABLE.
3. WIRE FABRIC SHALL BE 4' LONG (MIN.). WIDTH SHALL EQUAL SIDEWALK WIDTH MINUS 4".
4. MITER CHANNEL AS NECESSARY TO BE FLUSH WITH CURB FACE.

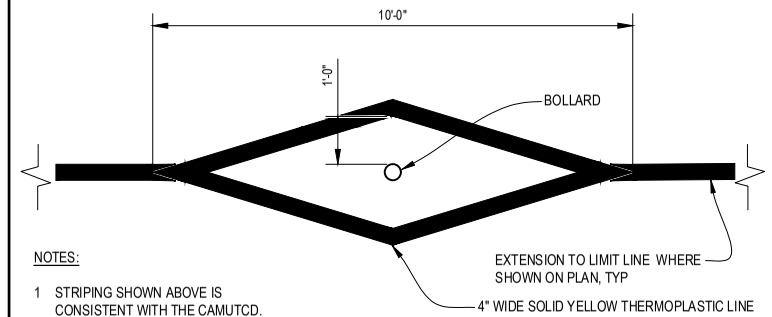
4 C-501 **TYPICAL SIDEWALK UNDERDRAIN DETAIL**
SCALE: NTS



NOTES:

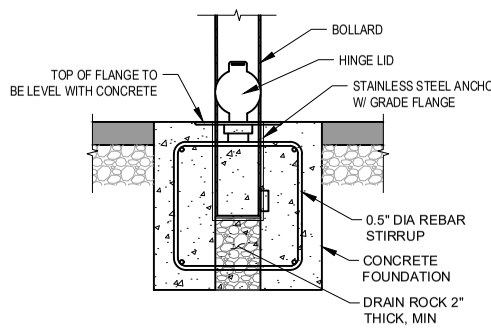
1. FINISH BACKSIDES OF CURBS.

5 C-501 **CONCRETE SIDEWALK WARNING CURB DETAIL**
SCALE: NTS



NOTES:

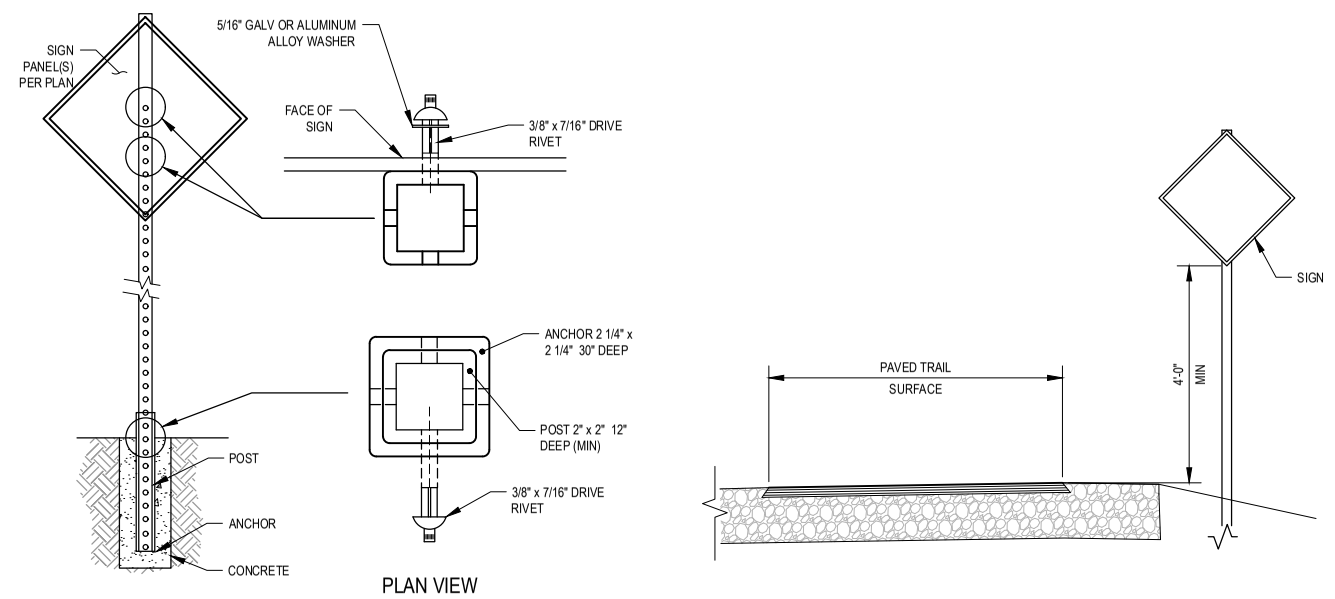
1 STRIPING SHOWN ABOVE IS CONSISTENT WITH THE CAMUTCD.



NOTES:

1. BOLLARDS SHALL BE FACTORY COATED, COLOR BLACK.

6 C-501 **TYPICAL REMOVABLE BOLLARD & STIRPING DETAILS**
SCALE: NTS



NOTE:

1. POST, SLEEVE AND ANCHOR SHALL BE HOT DIPPED GALVANIZED STEEL CONFORMING TO ASTM A653 DES. G90.

7 C-501 **ROADSIDE SIGN INSTALLATION DETAIL**
SCALE: NTS

90% PLANS
NOT FOR CONSTRUCTION

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0 1"

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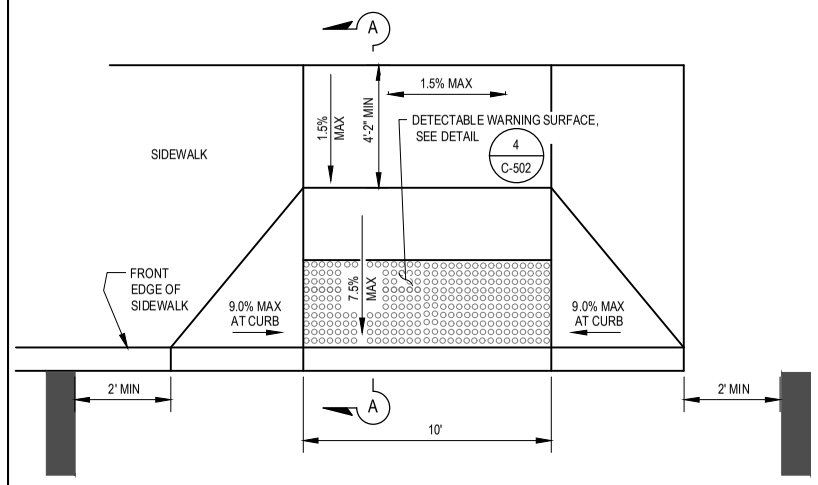
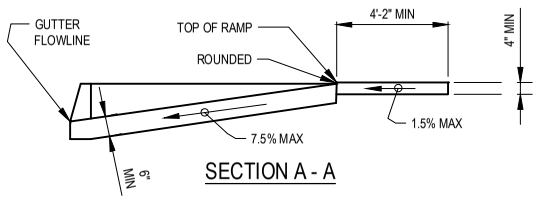
Project **MANILA HIGHWAY 255 SHARED USE PATH**
Title **CONSTRUCTION DETAILS**
Project No. **11145210**
Original Size **ANSI D**
Sheet No. **C-501**
Sheet **13** of **22**



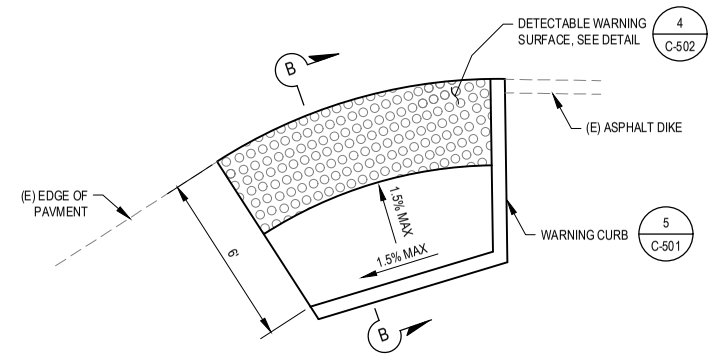
CASE A - PLAN VIEW

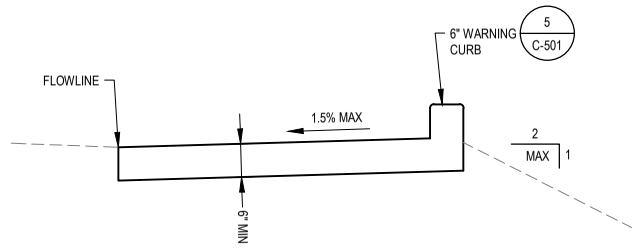


SECTION A - A

1 C-502 CURB RAMP DETAIL - CASE A

SCALE: NTS





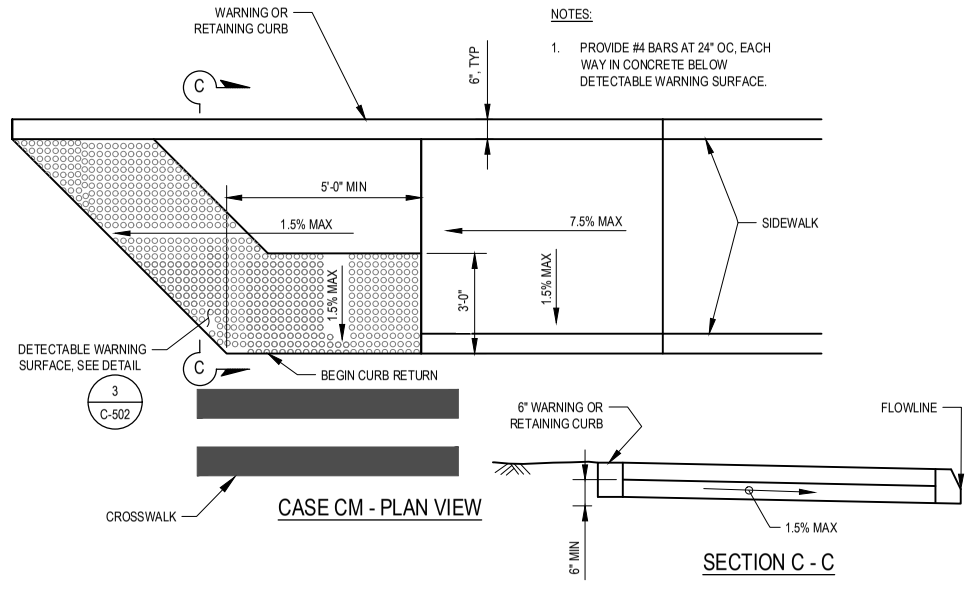
SECTION B - B

2 C-502 BLENDED TRANSITION

SCALE: NTS

PEDESTRIAN ACCESS NOTES:

1. THE CURB RAMP STANDARDS DEPICTED HERE MAY NOT BE APPROPRIATE FOR ALL LOCATIONS. FIELD CONDITIONS AT INDIVIDUAL LOCATIONS MAY REQUIRE SPECIFIC DESIGNS. DESIGNS MUST BE CONSISTENT WITH THE PROVISIONS OF THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION (CALTRANS) STANDARD PLANS (CURRENT EDITION) AND SUBSEQUENT REVISED STANDARD PLANS TO THE MAXIMUM EXTENT FEASIBLE.
2. CURB RAMP SHALL BE 6" THICK (MINIMUM) CONCRETE PLACED OVER 4" OF CLASS 2 AGGREGATE BASE COMPACTED TO 95% RELATIVE COMPACTION. SCARIFY SUBGRADE 6" DEEP, MOISTURE CONDITION AND RECOMPACT TO 95% RELATIVE COMPACTION.
3. TRANSITIONS FROM RAMPS AND LANDINGS TO WALKS, GUTTERS, OR STREETS SHALL BE FLUSH AND FREE OF ABRUPT CHANGES.
4. MAXIMUM SLOPES OF ADJOINING GUTTERS, THE ROAD SURFACE IMMEDIATELY ADJACENT TO THE CURB RAMP OR ACCESSIBLE ROUTE SHALL NOT EXCEED 5% WITHIN 2'-0" OF THE CURB RAMP.
5. DRILL AND DOWEL #4'S AT 24" O.C. INTO EXISTING CURB, GUTTERS, DRIVEWAYS AND SIDEWALKS.
6. A 6" HIGH WARNING CURB IS REQUIRED PER CBC WHENEVER THERE IS AN ABRUPT CHANGE IN GRADE ELEVATION OFF THE EDGE OF A WALKING SURFACE THAT EXCEEDS 4" VERTICAL EXCEPT BETWEEN A SIDEWALK AND AN ADJACENT STREET. LOCATIONS TO BE AS DIRECTED DURING CONSTRUCTION.
7. WHEN AN EXISTING ACCESSIBLE PATH OF TRAVEL IS TO BE BLOCKED OR REMOVED, THE CONTRACTOR SHALL SUBMIT A TEMPORARY ACCESS PLAN FOR APPROVAL. NO WORK SHALL COMMENCE UNTIL AN ACCESS PLAN HAS BEEN APPROVED BY THE AGENCY HAVING JURISDICTION
8. IF THE CONSTRUCTION WORK AREA IS WITHIN AN EXISTING FACILITY (E.G. BUS STOPS, CROSSWALKS, ETC.), CONTRACTOR SHALL PROVIDE 48 HOURS ADVANCE NOTICE TO OWNERS OF THE FACILITY INDICATING THE AFFECTED LOCATION AND DURATION OF WORK. NO TWO FACILITIES OR PROGRAMS IN SEQUENCE SHALL BE BLOCKED OR CLOSED FOR PUBLIC USE
9. PAYMENT FOR PROVIDING A CONTINUOUS PATH OF TRAVEL SHALL BE CONSIDERED AS INCLUDED IN VARIOUS ITEMS OF WORK AND NO SEPARATE PAYMENT SHALL BE MADE. PROVISIONS FOR CONTINUOUS PATH OF TRAVEL SHALL INCLUDE INSTALLATION AND MAINTENANCE OF TEMPORARY RAMPS, POTHOLING OF UTILITIES, RESTORATION OF EXISTING STREET IMPROVEMENTS, COORDINATION OF WORK, TRAFFIC CONTROLS AND ALL ASSOCIATED WORK NEEDED TO COMPLETE THIS REQUIREMENT.

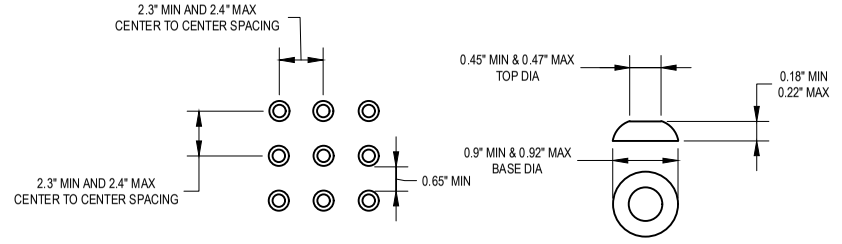


CASE CM - PLAN VIEW

SECTION C - C

3 C-502 CURB RAMP DETAIL - MODIFIED CASE CM

SCALE: NTS



RAISED TRUNCATED DOME PATTERN (IN-LINE)

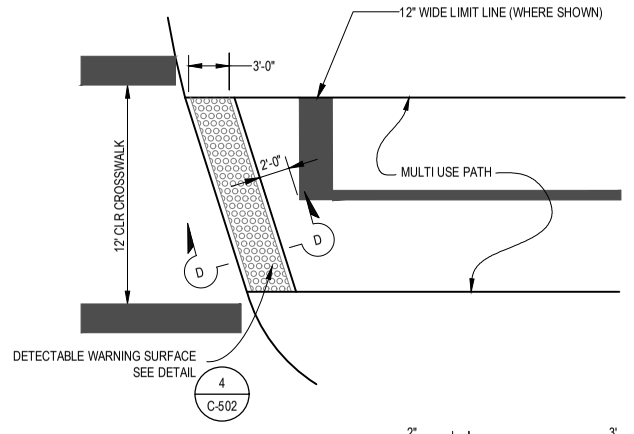
RAISED TRUNCATED DOME

NOTES:

1. CURB RAMPS SHALL HAVE A DETECTABLE WARNING SURFACE THAT EXTENDS THE FULL WIDTH AND 3'-0" DEPTH OF RAMP. SEE RAMP DETAILS ON THIS SHEET FOR DETECTABLE WARNING LAYOUT.
2. THE EDGE OF THE DETECTABLE WARNING SHALL BETWEEN 6" AND 8" AWAY FROM THE STREET GUTTER FLOWLINE EXCEPT FOR PARALLEL CURB RAMPS OR BLENDED TRANSITIONS, WHERE THE DETECTABLE WARNING SURFACE SHALL BE BETWEEN 0" AND 2" AWAY FROM THE STREET GUTTER FLOWLINE.
3. DETECTABLE WARNING SHALL BE A PREFORMED MATERIAL AS APPROVED BY THE ENGINEER. THE DETECTABLE WARNING SHALL BE CAST-IN, NOT SURFACE APPLIED UNLESS NOTED OTHERWISE. THE USE OF CONCRETE STAMPING IS NOT PERMITTED. NEW RAMPS SHALL BE CAST-IN-PLACE AND EXISTING RAMPS SHALL BE SURFACE-APPLIED.
4. DETECTABLE WARNING SURFACE SHALL BE FEDERAL YELLOW.

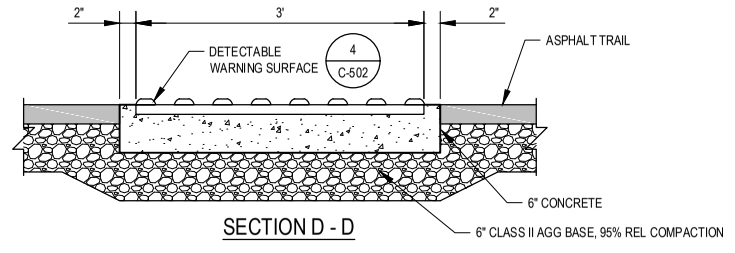
4 C-502 DETECTABLE WARNING SURFACE DETAILS

SCALE: NTS



NOTE:

1. TRANSITIONS TO WALKS, GUTTERS OR STREETS SHALL BE FREE OF ABRUPT CHANGES.



SECTION D - D

5 C-502 DETECTABLE WARNING SURFACE AT VEHICLULAR CROSSING DETAILS

SCALE: NTS

90% PLANS

NOT FOR CONSTRUCTION

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0 1"

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Project Manager	J.WOLF	Date	1/31/2020
		Scale	AS SHOWN

Client COUNTY OF HUMBOLDT
Project MANILA HIGHWAY 255 SHARED USE PATH
Title CONSTRUCTION DETAILS
Project No. 11145210
Original Size ANSI D
Sheet No. C-502
Sheet 14 of 22

October 7, 2021

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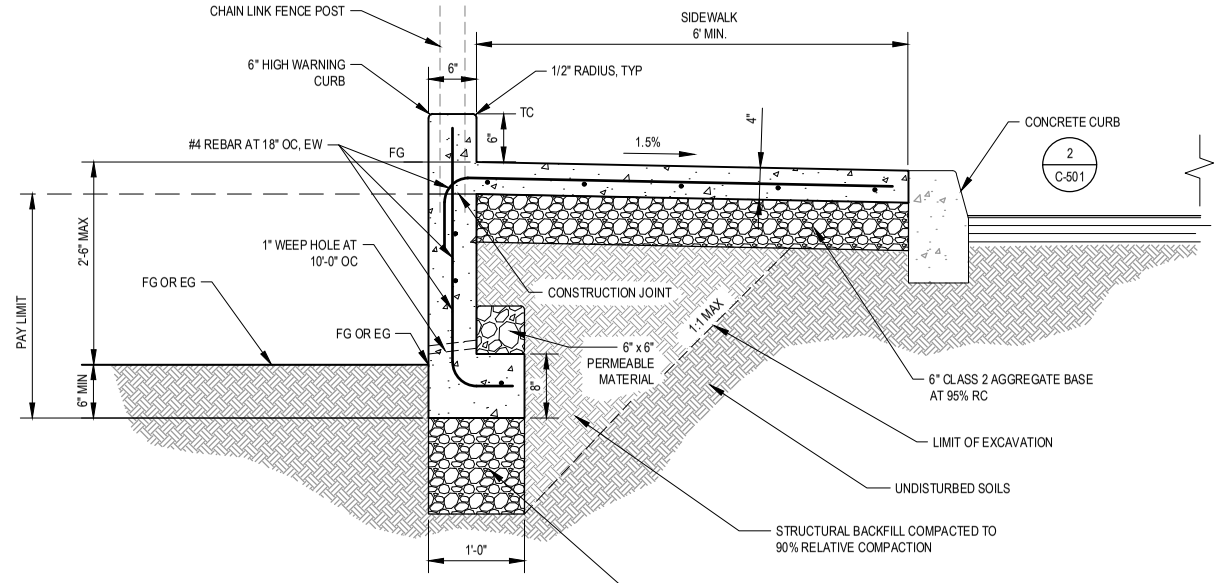
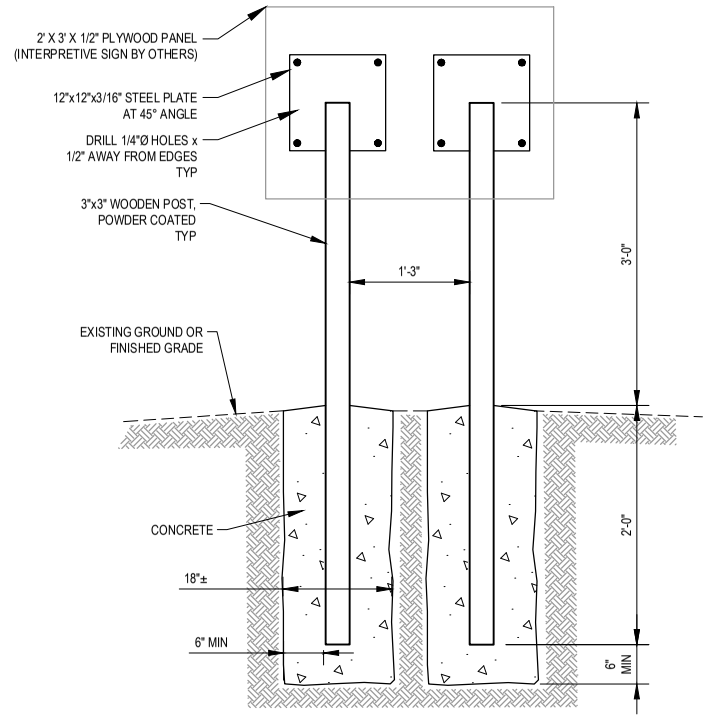


NOTES:

1. 1/2" EXPANSION JOINTS AT 50' OC.
2. ALL BARS DISCONTINUOUS AT EXPANSION JOINTS.
3. GRANULAR BACKFILL SHALL BE CLASS 1 PERMEABLE MATERIAL PER CALTRANS STANDARD SPECIFICATIONS, OR APPROVED MATERIAL.
4. PROVIDE JOINTS PER 3 / C-501

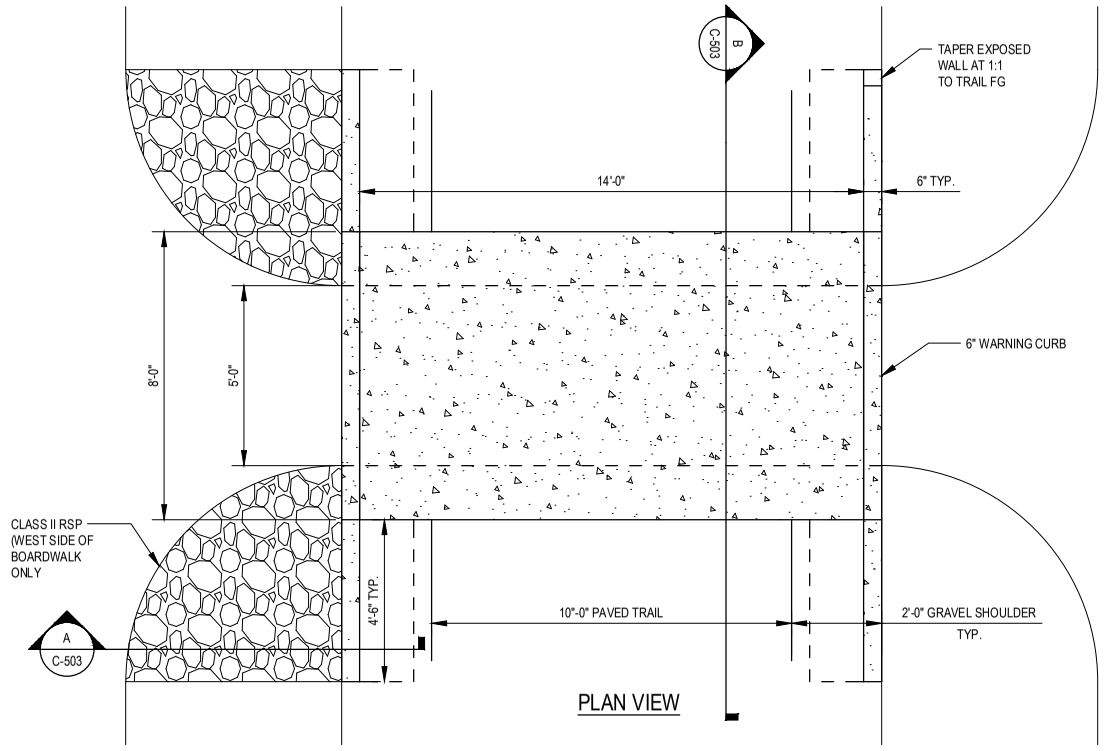
1 / C-503 TYPICAL SIDEWALK WITH RETAINING FOOTING DETAIL

SCALE: NTS

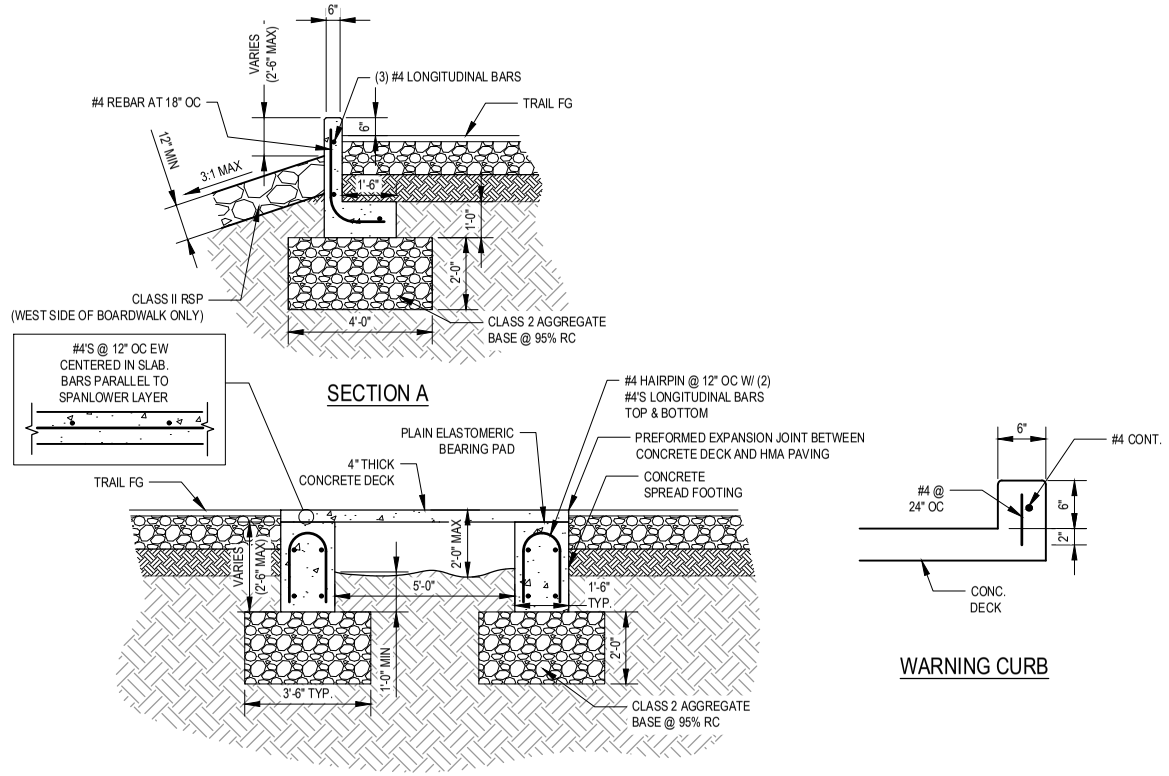


2 / C-503 INTERPRETIVE SIGN DETAIL

SCALE: NTS



PLAN VIEW



SECTION B

3 / C-503 CONCRETE BOARDWALK DETAIL

SCALE: NTS

90% PLANS

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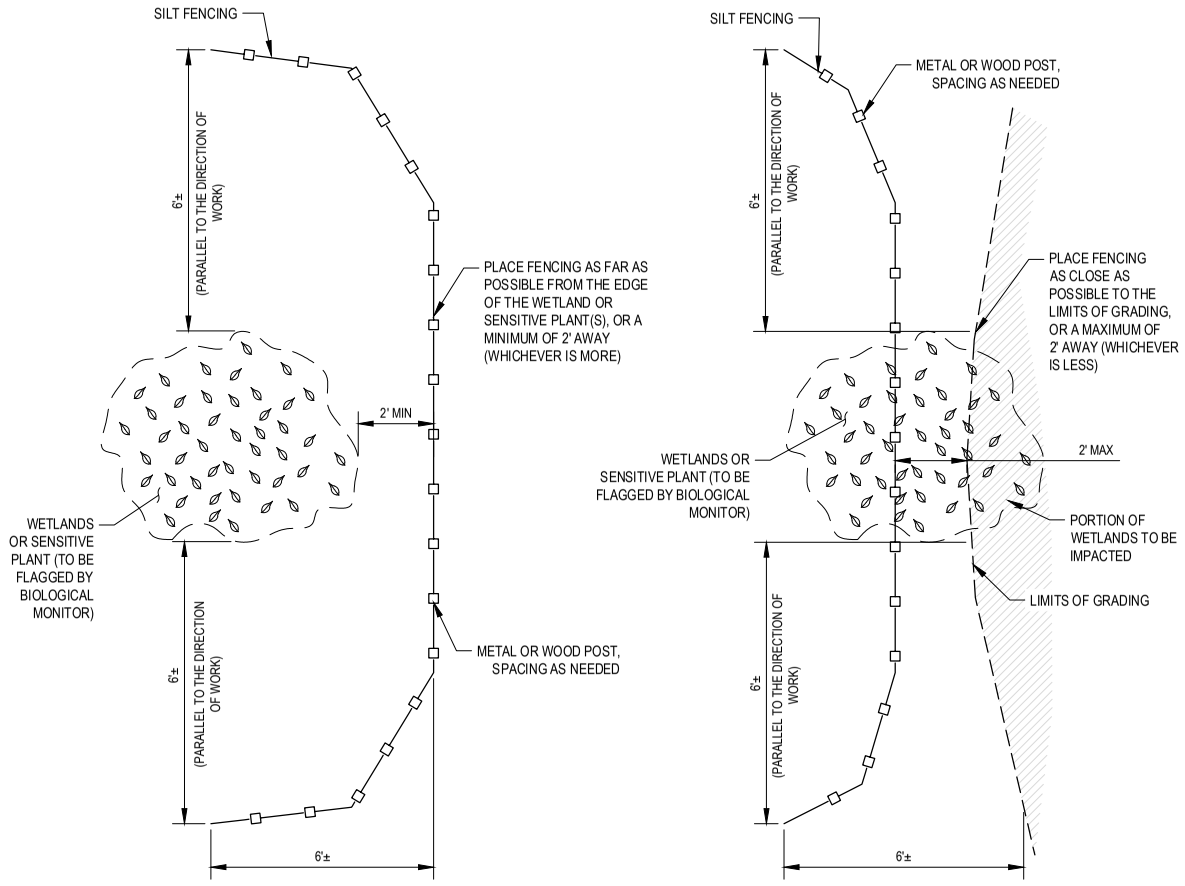
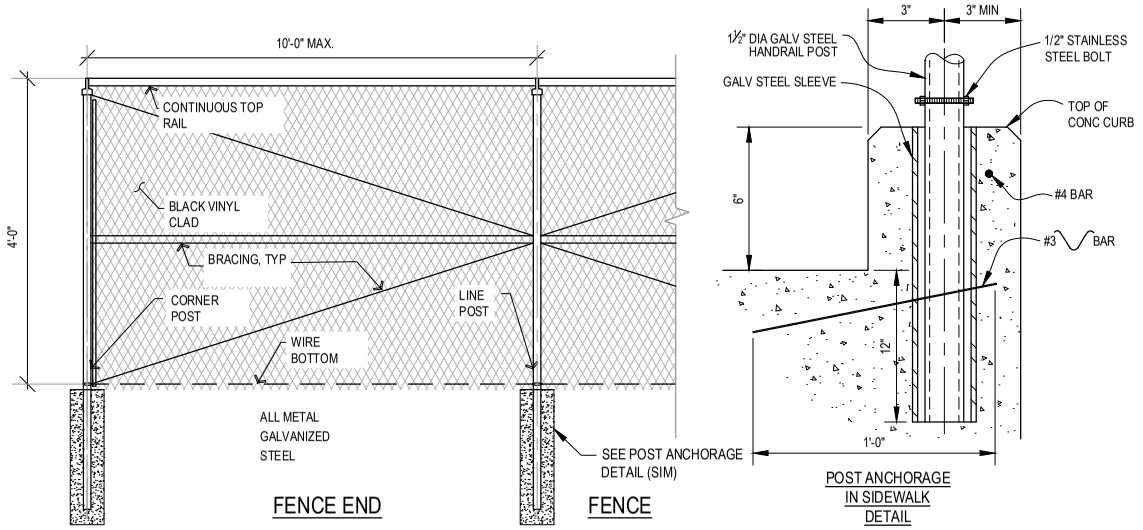


WORKING ADJACENT TO WETLANDS OR SENSITIVE AREAS

WORKING WITHIN WETLANDS OR SENSITIVE AREAS

1 C-504 **TEMPORARY VEGETATION PROTECTION FENCING**

SCALE: NTS



FENCE POST NOTE:

TERMINAL POSTS SHALL BE 2-3/8" DIAMETER AND LINE POSTS SHALL BE 1-5/8" DIAMATER.

2 C-504 **TYPICAL CHAIN LINK FENCE DETAIL**

SCALE: NTS

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90% PLANS

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0 1"

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Project Manager J.WOLF	Date 1/30/2020	Title	CONSTRUCTION DETAILS
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		Original Size ANSI D	Sheet No. C-504
			Sheet 16 of 22

PLANTING MIX A: PALUSTRINE EMERGENT (TOTAL AREA 5,765 SF / 0.13 ACRES)

Symbol	Overall Spacing (feet on center)	Spacing Type (1 or seed)	Quantity per Acre	Frequency (%)	Vegetation Strata	Common Name	Unit	Plant Group Designation	Plant Quantities
	3	Random	1,761	35%	Obligate Wetland Plant	small-fruit bulrush	4" Plug	P	229
			1,509	30%	Obligate Wetland Plant	slough sedge	4" Plug	P	196
			755	15%	Obligate Wetland Plant	Pacific oenanthe	4" Plug	P	98
			503	10%	Obligate Wetland Plant	Pacific silverweed	4" Plug	P	65
			503	10%	Facultative Wetland Plant	salt rush	4" Plug	P	65

PLANTING MIX B: PALUSTINE SCRUB - SHRUB (TOTAL AREA 26,282 SF / 0.6 ACRES)

Symbol	Overall Spacing (feet on center)	Spacing Type	Quantity per Acre	Frequency (%)	Vegetation Strata	Common Name	Unit	Plant Group Designation	Plant Quantities
	10	Random	91	20%	Facultative Wetland Plant	coastal willow	Cutting	H	54
	10		91	20%	Facultative Wetland Plant	Pacific willow	Cutting	H	54
	20		22.8	20%	Facultative Wetland Plant	California wax myrtle	1-gal container	A	14
	3		1,006	20%	Obligate Wetland Plant	slough sedge	4" Plug	P	604
	3		1,006	20%	Obligate Wetland Plant	Pacific oenanthe	4" Plug	P	604

PLANTING MIX C: ONE PARAMETER COASTAL WILLOW WETLANDS (TOTAL AREA 2,642 SF / 0.06 ACRES)

Symbol	Overall Spacing (feet on center)	Spacing Type	Quantity per Acre	Frequency (%)	Vegetation Strata	Common Name	Unit (lbs/acre)	Plant Group Designation	Plant Quantities
	20	Random	45.6	40%	Facultative Wetland Plant	California wax myrtle	1-gal container	A	3
	10		91	20%	Facultative Wetland Plant	California blackberry	1-gal container	A	5
	10		181	40%	Facultative Wetland Plant	coastal willow	Cutting	H	11

PLANTING MIX D: WETLAND EDGE SEED MIX (TOTAL 43,561 SF / 1.0 ACRES)

Symbol	Quantity per Acre (lbs/acre)	Frequency (%)	Vegetation Strata	Common Name	Plant Quantities (lbs per acre)
	10	20	Facultative Plant	Pacific American-aster	10
	15	20	Facultative Wetland Plant	Pacific rush	15
	10	20	Obligate Wetland Plant	bulrush	10
	15	20	Facultative Plant	red fescue	15
	10	20	Obligate Wetland Plant	slough sedge	10

PLANTING MIX TABLES

NOT TO SCALE

PLANT INSTALLATION SCHEDULE

ACTIVITY DESCRIPTION	DATE(S) / TIMELINE
PIEZOMETER INSTALLATION	PRIOR TO SEED APPLICATION AND PLANT INSTALLATION
SEED, STRAW AND HYDROMULCH APPLICATION	SEPTEMBER 15 TO OCTOBER 31
PLANT INSTALLATION	NOVEMBER 1 TO DECEMBER 15

90% PLANS

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0 1"

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Title WETLAND CREATION
PLANTING MIX TALBLES AND PERMIT SCHEDULE
Project No. 11145210

Original Size ANSI D | Sheet No. L-001 | Sheet 17 of 22

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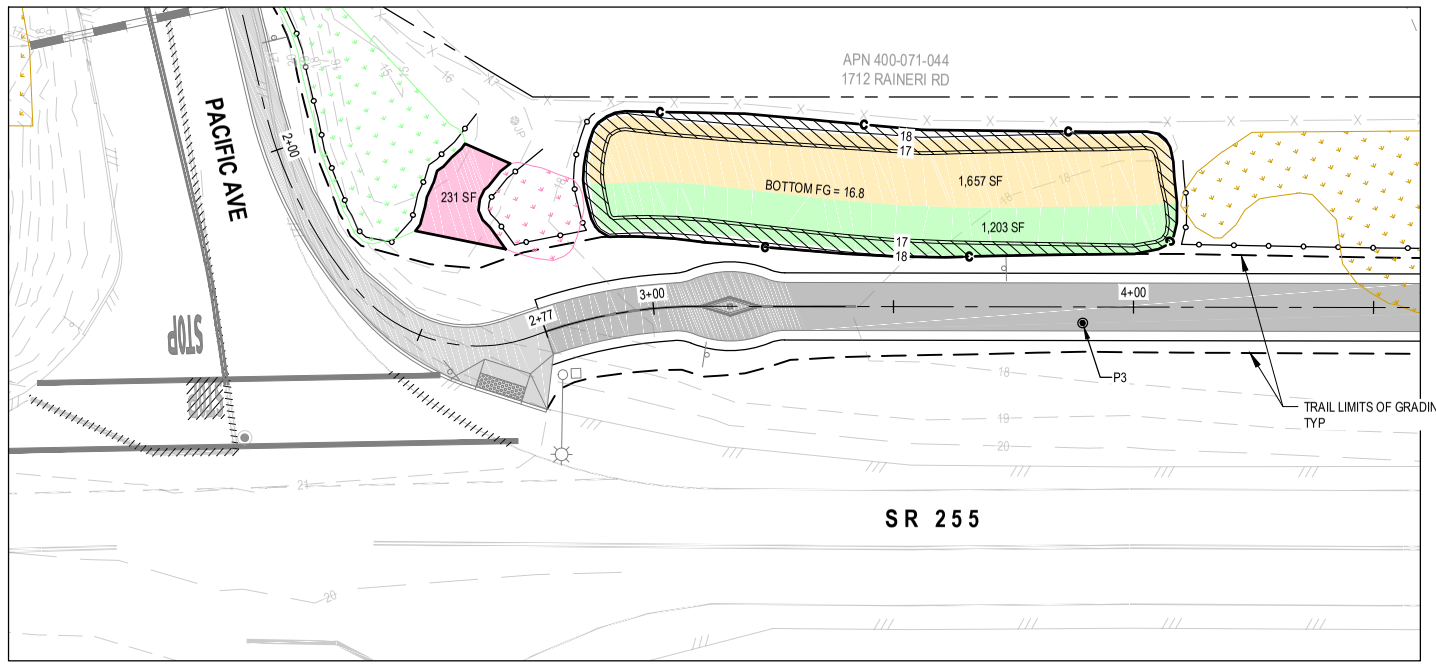
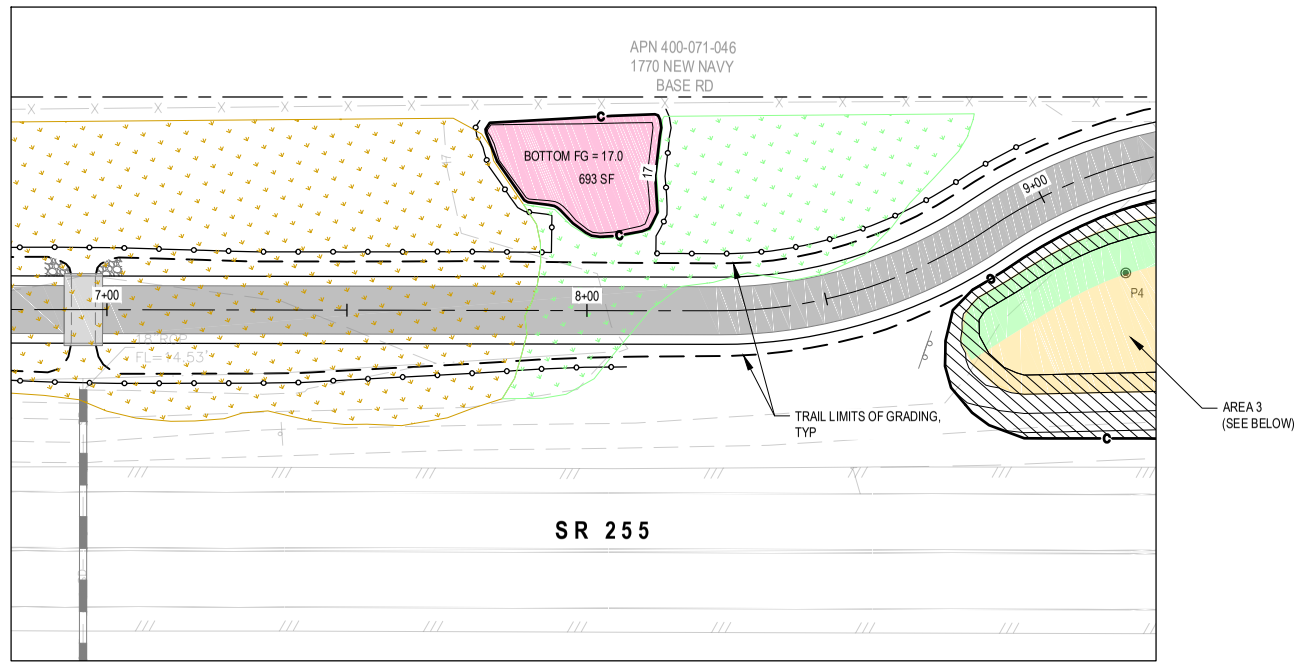
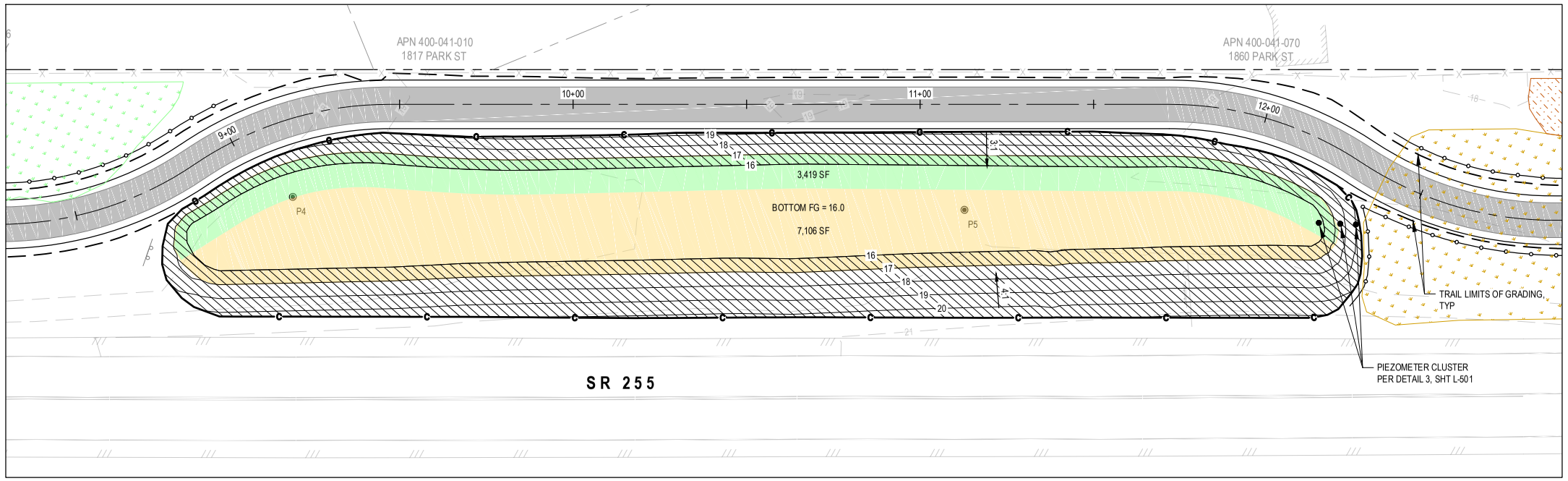


AREA 1
3,091 SF TOTAL



AREA 2
693 SF TOTAL



AREA 3
10,525 SF TOTAL

0 20' 40'

N

LEGEND

- (E) PALUSTRINE EMERGENT WETLAND
- (E) PALUSTRINE SCRUB SHRUB WETLAND
- (E) COASTAL WETLAND
- (E) RUBUS URSINUS (COASTAL BRAMBLES)
- (E) WATERS
- (E) PIEZOMETER
- SF PROPOSED ON-SITE WETLAND CREATION AREA: PALUSTRINE EMERGENT
- SF PROPOSED ON-SITE WETLAND CREATION AREA: PALUSTRINE SCRUB-SHRUB
- SF PROPOSED ON-SITE WETLAND CREATION AREA: COASTAL
- (N) HMA PAVING
- WETLAND SEED MIX
- VEGETATION PROTECTION FENCING
- C CUT DAYLIGHT

90% PLANS
NOT FOR CONSTRUCTION

COUNTY OF HUMBOLDT
Vibrant Home of the Redwoods

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0 1"

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Title WETLAND CREATION AREAS 1 - 3
Project No. 11145210
Original Size ANSI D
Sheet No. L-101
Sheet 18 of 22

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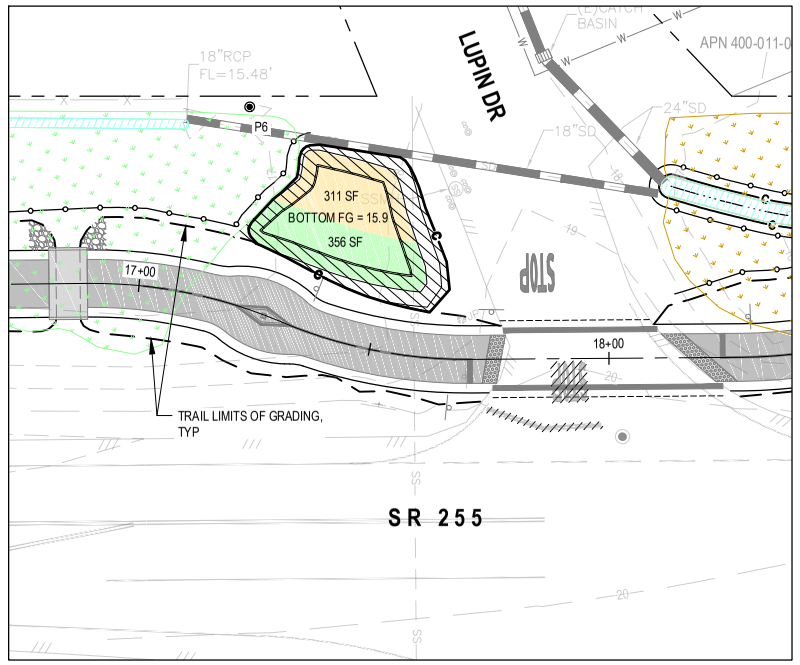
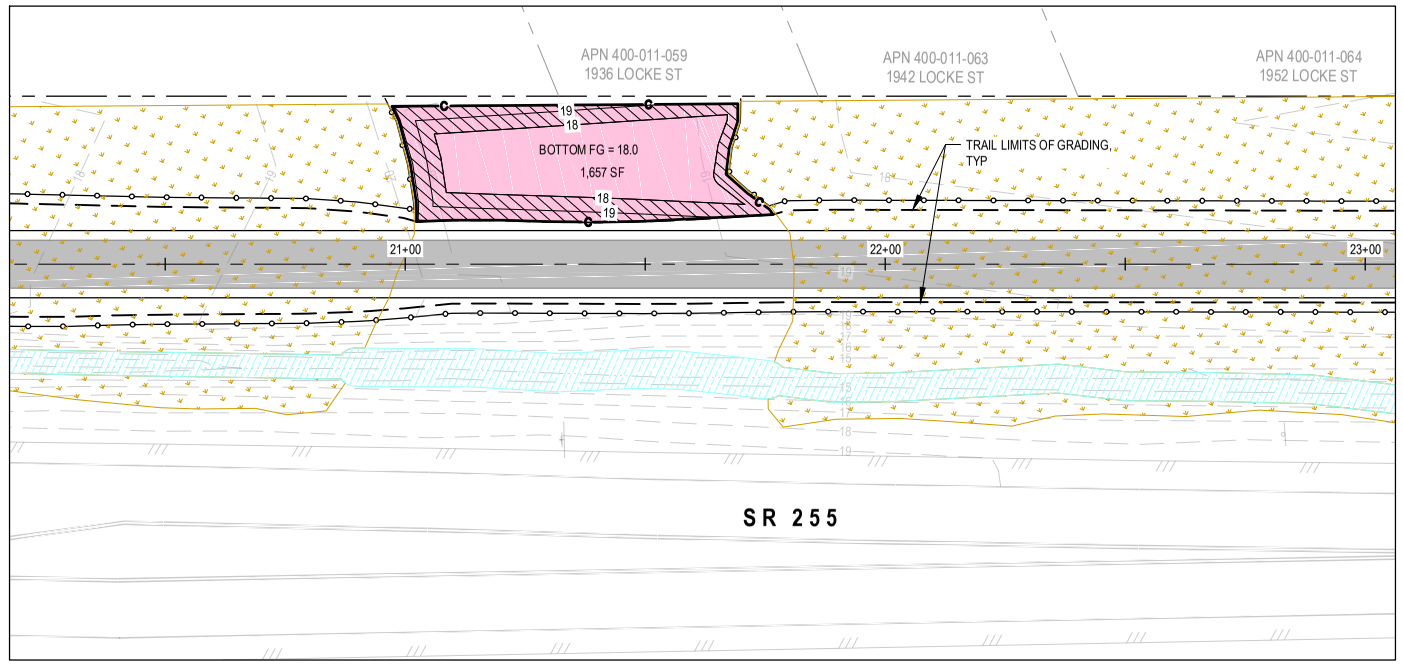
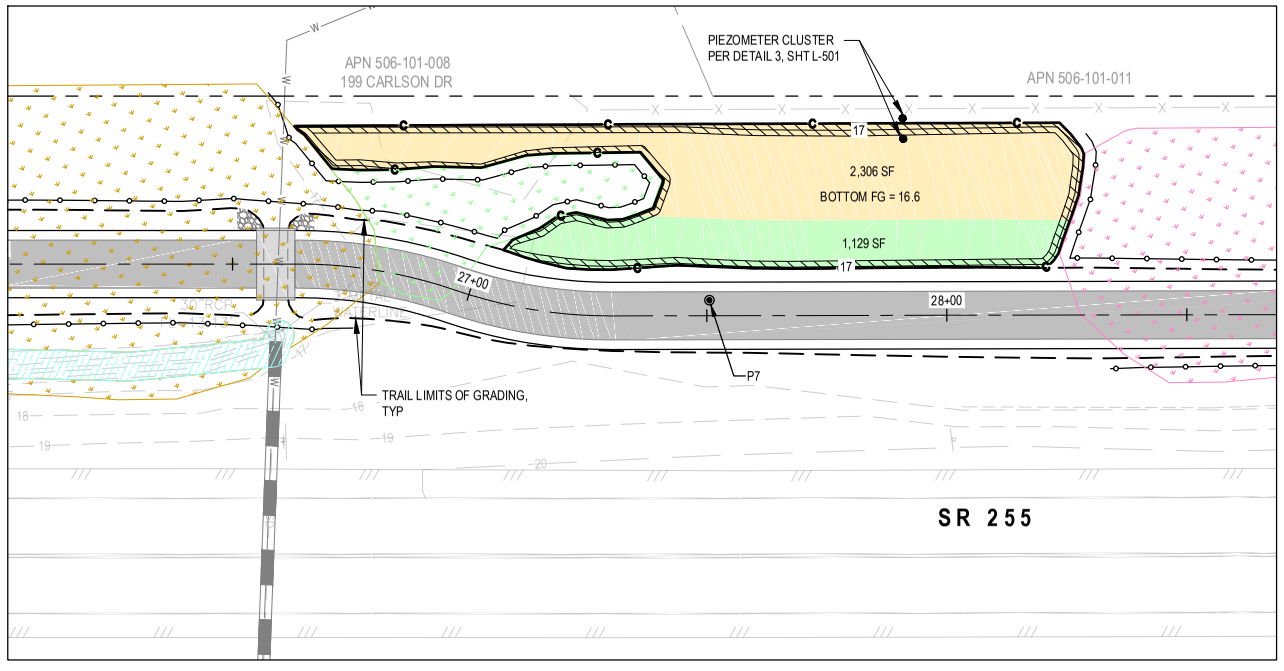


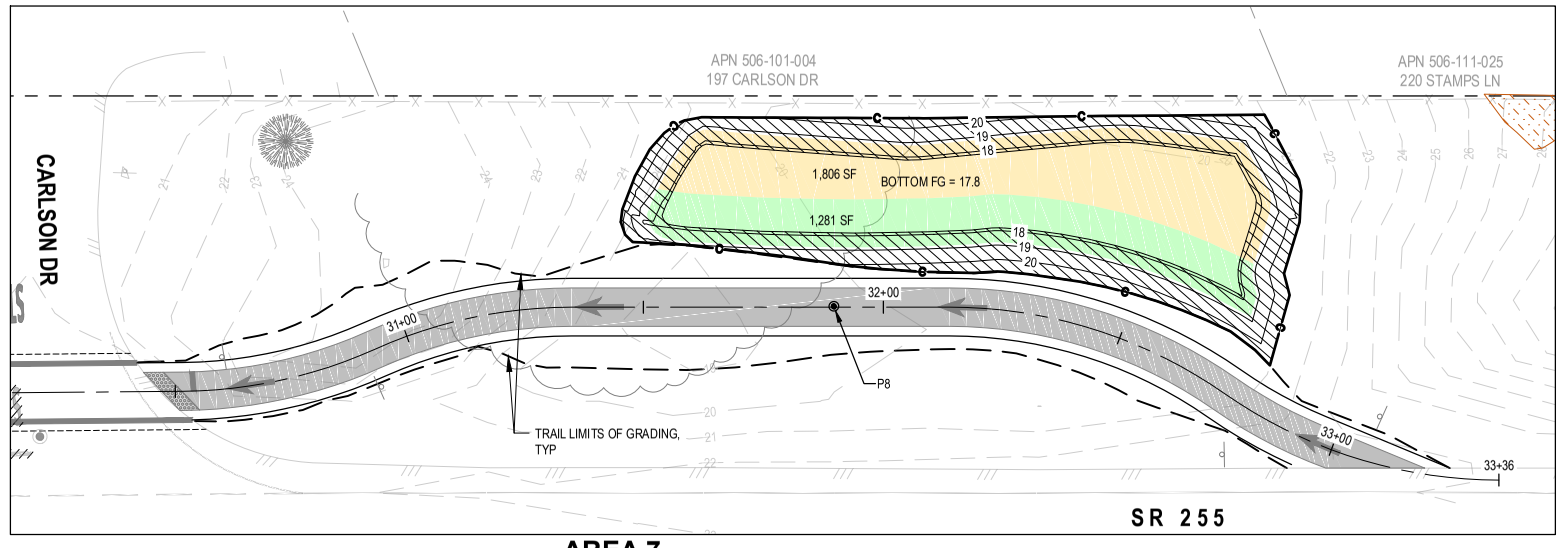
AREA 4
667 SF TOTAL



AREA 5
1,657 SF TOTAL



AREA 6
3,435 SF TOTAL



AREA 7
3,086 SF TOTAL

LEGEND

- (E) PALUSTRINE EMERGENT WETLAND
- (E) PALUSTRINE SCRUB SHRUB WETLAND
- (E) COASTAL WETLAND
- (E) RUBUS URSINUS (COASTAL BRAMBLES)
- (E) WATERS
- (E) PIEZOMETER
- SF PROPOSED ON-SITE WETLAND CREATION AREA: PALUSTRINE EMERGENT
- SF PROPOSED ON-SITE WETLAND CREATION AREA: PALUSTRINE SCRUB-SHRUB
- SF PROPOSED ON-SITE WETLAND CREATION AREA: COASTAL
- (N) HMA PAVING
- WETLAND SEED MIX
- VEGETATION PROTECTION FENCING
- C CUT DAYLIGHT

0 20' 40'

N

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COUNTY OF HUMBOLDT
The Home of the Redwoods

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Project No. 11145210
Original Size ANSI D
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October 7, 2021
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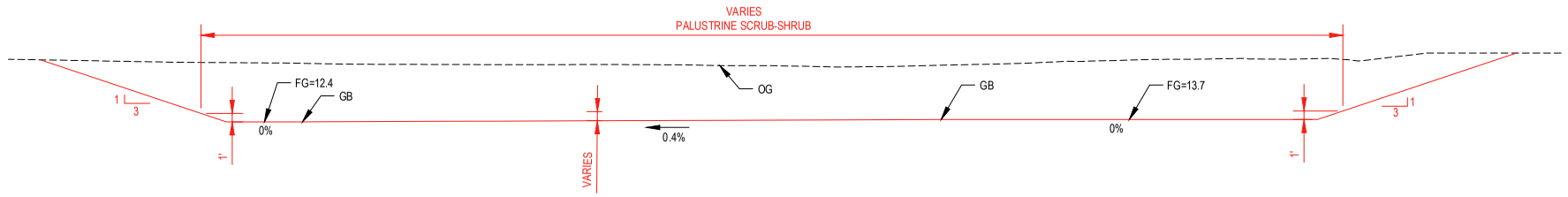

SECTION A - A

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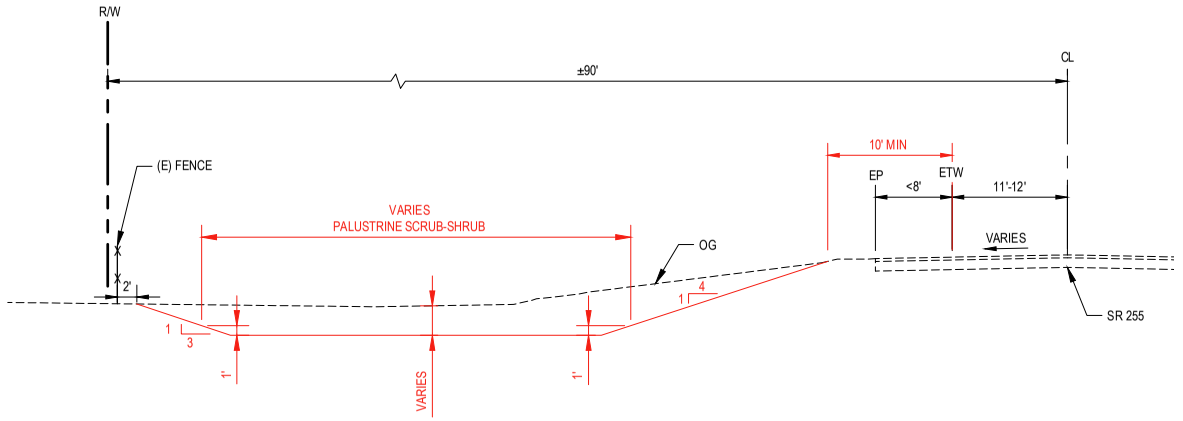

SECTION B - B

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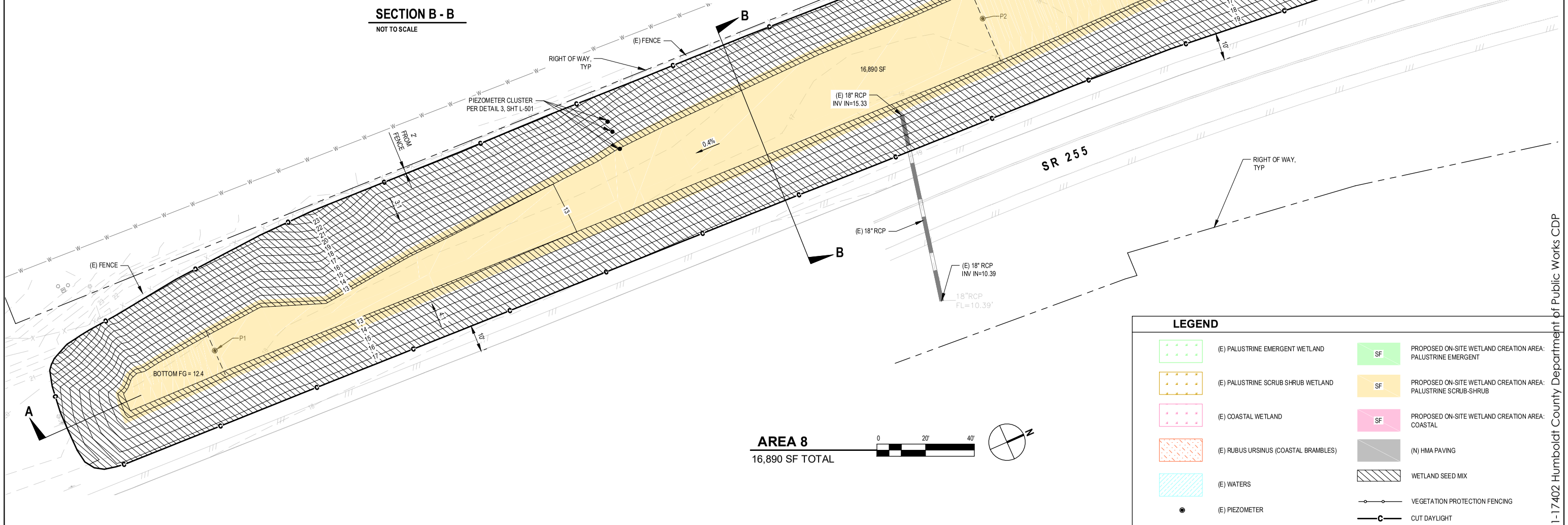

AREA 8

16,890 SF TOTAL

0 20' 40'

N

LEGEND

- (E) PALUSTRINE EMERGENT WETLAND
- (E) PALUSTRINE SCRUB SHRUB WETLAND
- (E) COASTAL WETLAND
- (E) RUBUS URSINUS (COASTAL BRAMBLES)
- (E) WATERS
- (E) PIEZOMETER
- SF PROPOSED ON-SITE WETLAND CREATION AREA: PALUSTRINE EMERGENT
- SF PROPOSED ON-SITE WETLAND CREATION AREA: PALUSTRINE SCRUB-SHRUB
- SF PROPOSED ON-SITE WETLAND CREATION AREA: COASTAL
- (N) HMA PAVING
- WETLAND SEED MIX
- VEGETATION PROTECTION FENCING
- C CUT DAYLIGHT

90% PLANS

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Project MANILA HIGHWAY 255 SHARED USE PATH
Title WETLAND CREATION AREA 8

Project No. 11145210

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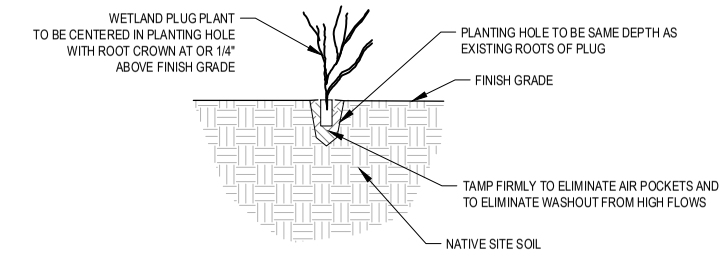
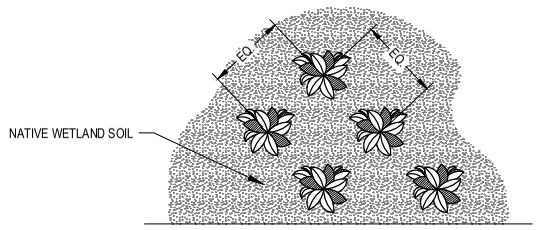


SECTION

NOTES:

1. USE SPADE OR TROWEL TO DIG HOLE BY HAND.
2. SCARIFY SIDES AND BOTTOM OF PLANTING HOLE.

PLUG INSTALLATION



PLAN VIEW

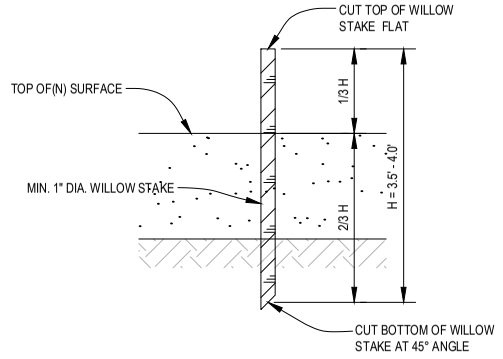
NOTES:

1. SEE PLANTING SCHEDULE L-001 FOR WETLAND PLUG SPECIES, SIZE, AND SPACING DIMENSION.

PLUG PLACEMENT

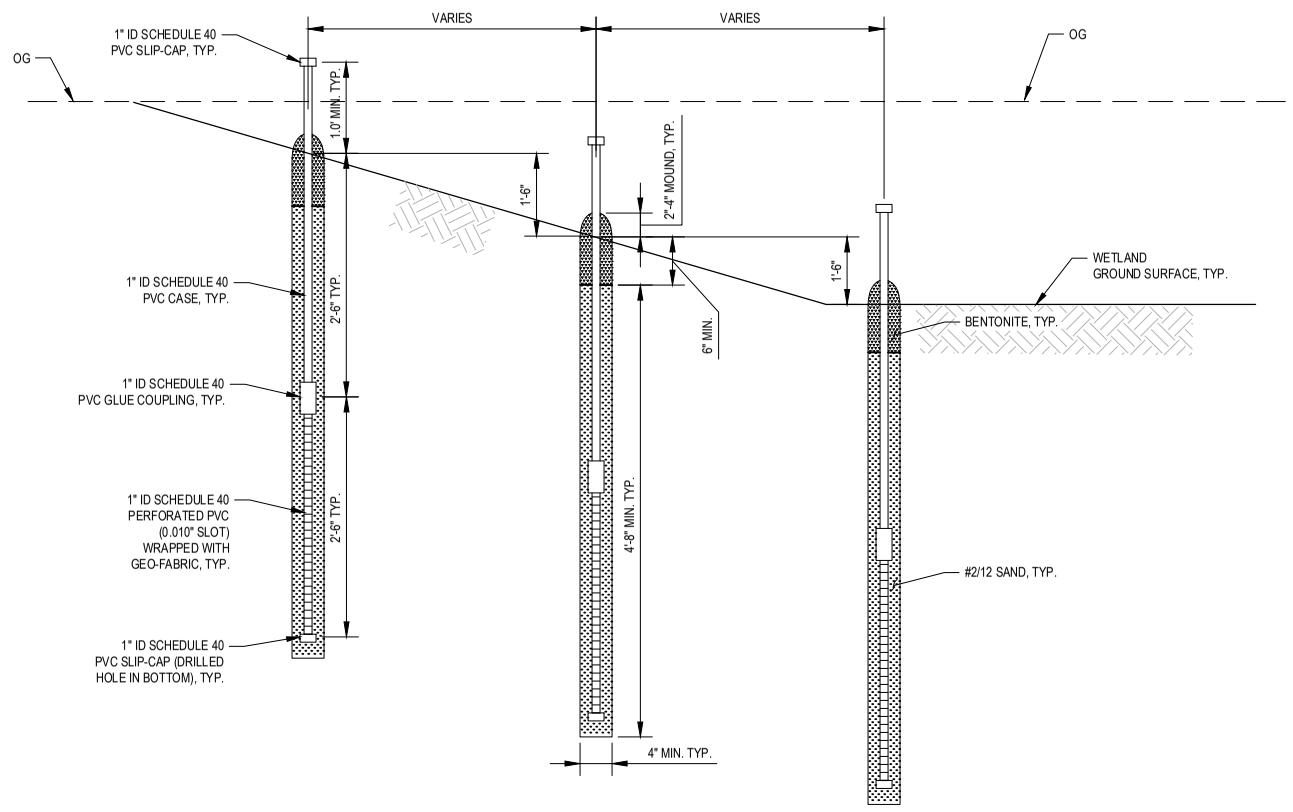
1 L-501 **PLUG PLANTING DETAIL**

NOT TO SCALE



2 L-501 **LIVE WILLOW STAKE DETAIL**

NOT TO SCALE



3 L-501 **PIEZOMETER CLUSTER DETAIL**

NOT TO SCALE

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REGISTERED PROFESSIONAL ENGINEER JOSHUA A. WOLF No. C70358 CIVIL STATE OF CALIFORNIA

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Drafting Check	J.WOLF	Design Check	J.WOLF
Project Manager	J.WOLF	Date	1/30/2020
This document shall not be used for construction unless signed and sealed for construction.		Scale	AS SHOWN

Client COUNTY OF HUMBOLDT

Project MANILA HIGHWAY 255 SHARED USE PATH

Title WETLAND CREATION DETAILS

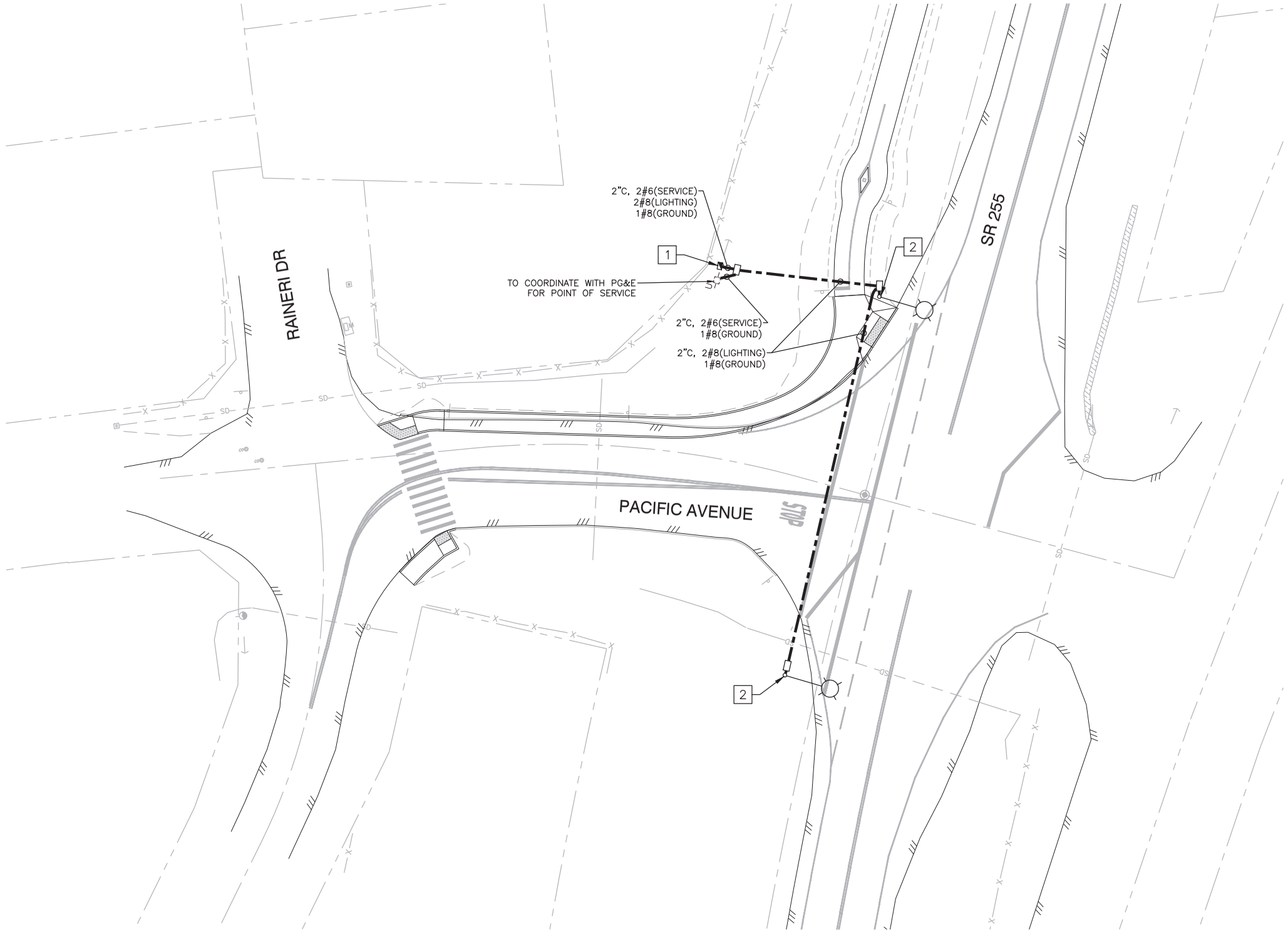
Project No. 11145210

Original Size ANSI D

Sheet No. L-501

Sheet 21 of 22

Plot Date: 30 January 2020 - 3:19 PM Plotted By: Owen Goode Filename: \\ghdnet\ghd\US\Eureka\Projects\11\11145210 Manila Hwy 255 Trail\06-CAD\Sheets\11145210_17_ENV501.dwg



GENERAL ELECTRICAL NOTES:

1. ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST EDITIONS OF HUMBOLDT COUNTY IMPROVEMENT STANDARDS AND THE 2018 CALTRANS STANDARD PLANS AND SPECIFICATIONS AND REVISED SECTIONS.
2. ELECTRICAL PLANS ARE DIAGRAMATIC AND ARE CORRECT FOR GENERAL DESIGN ONLY. THE EXACT LOCATIONS OF EQUIPMENT AND APPURTENANCES SHALL BE DETERMINED IN THE FIELD BY THE ELECTRICAL ENGINEER.
3. POLES AND PULL BOXES, SHALL BE LOCATED IN THE PRESENCE OF THE ENGINEER OR INSPECTOR. LOCATIONS SHALL BE APPROVED BY THE ENGINEER OR INSPECTOR PRIOR TO INSTALLATION. CONTRACTOR SHALL CONTACT ENGINEER OR INSPECTOR AT LEAST 2 WORKING DAYS PRIOR TO LOCATING EQUIPMENT TO ARRANGE FOR THE PRESENCE OF THE ENGINEER OR INSPECTOR.
4. ALL UTILITIES SHOWN ON THESE PLANS ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL VERIFY OVERHEAD AND UNDERGROUND CLEARANCE WITH P.G.&E., AT&T, AND OTHER AFFECTED UTILITIES PRIOR TO THE START OF WORK.
5. THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.
6. ALL NEW PULL BOXES SHALL BE NO. 5 UNLESS OTHERWISE NOTED.
7. CONDUIT INSTALLATION ACROSS ROADWAYS AND THROUGH WETLANDS SHALL BE BY JACKING AND DIRECTIONAL DRILLING METHODS UNLESS NOTED OTHERWISE.
8. CONTRACTOR SHALL CONTACT PG&E TO VERIFY SERVICE POINT FOR THE STREET LIGHTING SYSTEM AND POLE NUMBERS FOR ALL LUMINAIRE POLES PRIOR TO START OF WORK.
9. ALL CONDUIT SHALL BE 2" UNLESS OTHERWISE NOTED ON THE PLAN.

LEGEND:

- EXISTING UTILITY POLE
- PROPOSED TYPE 15-SB STREET LIGHT POLE (LED 87W)
- PROPOSED NO. 5 PULL BOX
- PROPOSED TYPE III-AF SERVICE PEDESTAL
- PROPOSED CONDUIT

PROJECT NOTES:

1. FURNISH AND INSTALL TYPE III-AF SERVICE PEDESTAL WITH 30A STREET LIGHTING CIRCUIT BREAKER.
2. FURNISH AND INSTALL TYPE 15-SB POLE PER CALTRANS STANDARD PLAN ES-6A.

N

0 20' 40'

SCALE: 1"=20'

90% PLANS
NOT FOR CONSTRUCTION

Bar is one inch on original size sheet
0 1"

REGISTERED PROFESSIONAL ENGINEER
DRAFT
Exp. 6/30/21
CIVIL
STATE OF CALIFORNIA

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Drawn	AH	Designer	RP
Drafting Check	AD	Design Check	RP
Project Manager	J.WOLF	Date	1/24/2020
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Client COUNTY OF HUMBOLDT
Project MANILA HIGHWAY 255 BIKE PATH PROJECT
Title LIGHTING PLANS
Project No. 11145210
Original Size ANSI D
Sheet No. E-101
Sheet 22 of 22

ATTACHMENT 3

INITIAL STUDY AND MITIGATED NEGATIVE DECLARATION

SEE LINK BELOW

https://ceqanet.opr.ca.gov/2021080304

ATTACHMENT 4

REFERRAL AGENCY COMMENTS AND RECOMMENDATIONS

The project was referred to the following agencies for review and comment. Those agencies that provided written comments are checked off.

Referral Agency	Response	Recommendation	Attached	On File
County Building Inspection Division				
Public Works Land Use Division	✓	Approval		✓
Department of Environmental Health	✓	Approval		✓
Manila Community Services District	✓	Approval		✓
Arcata Fire Protection District	✓	Approval		✓
California Department of Fish and Wildlife				
California Coastal Commission				
National Fish and Wildlife Service				
Regional Water Quality Control Board				
Caltrans				

ATTACHMENT 5

PUBLIC COMMENTS

Estlow, Trevor

From: Kathryn Cesarz [redacted]
Sent: Friday, August 20, 2021 7:59 PM
To: Estlow, Trevor
Subject: Manila State Route 255 Shared Route Pathway Project Comment

Hello Mr. Estlow,

My name is Kathryn Cesarz and I have been a resident in Manila near the proposed project for four years, at 1843 Park St which my partner Jesse March owns. I want to express how excited and happy I am to hear about the proposed path. I truly believe that improving habitability, walkability and safety in Manila is a wonderful opportunity to improve and grow the neighborhood.

Based on the mailing that Humboldt county sent out, it sounds like the project would deal with heavy pedestrian and bike traffic areas in the most densely populated part of Manila. I strongly support that! I especially would emphasize the value of both bicycle transportation and pedestrian traffic moving through the intersections described. Residents in the neighborhood walk and bike often around here, as do folks who appear to just be passing through for exercise and commuting. I would emphasize the value of non-motorized traffic as an aspect of the culture of this neighborhood, that enhances and supports the beautiful natural area and protects wildlife. If anything I wish that a quality bike and walking path could be established all the way between Arcata and Eureka on the 255. People would definitely use it.

Is this an appropriate place to request a way to view a visual representation of the proposed project?

Thank you for your time and best of luck with this project.

Kind regards,
Kathryn Cesarz
--
Kathryn Cesarz

Theatre Artist
[redacted]

Estlow, Trevor

From: Colleen Clifford [redacted]
Sent: Monday, August 23, 2021 1:48 PM
To: Estlow, Trevor
Subject: Support for the Mitigated Neg Dec for the Manila Pathway

To: Humboldt County Planning and Building Department

This letter is to provide comment and support for the Mitigated Negative Declaration for the Manila Pathway Project.

My husband and I have lived in Manila for 19 years, purchasing our property 17 years ago. Here we have happily set down roots and have two young children who attend Redwood Coast Montessori in Manila. We all enjoy our coastal lifestyle and try to utilize our community resources as much as possible.

This project will provide so many positive impacts on the residents of Manila. Increased connectedness between neighborhoods; safe traveling to the dune recreation areas and Humboldt Coastal Nature Center, Manila Park, mini-mart and mini-golf, RCM school and playground; safer vehicle passage due to fewer pedestrians on S.R. 255; enhanced physical activity; appreciation of the dune landscape; and access to evacuation routes for tsunami and earthquake preparedness.

Having this pathway soon will be a boon to our small coastal community and the Humboldt community at-large who will visit with more comfort and enjoyment.

Please support this project by supporting the Mitigated Negative Declaration.

Thank you,
Colleen Clifford and Ian Davidson
415 Orange Drive
Manila, CA 95521
[redacted]

PS: Hi Trevor! :)

231 Dean St.
Arcata (Manila) CA. 95521

9/1/21

Humboldt County Planning
and Building Dept
Attention: Trevor Estlow

I strongly support the development of a Class 1 bike path along the western side of Highway 255 in Manila. Besides providing a safer bike route for bicyclist it also connects two neighborhoods in Manila for pedestrians. Hopefully it will encourage the development of other bike/pedestrian trails in the county.

Sincerely,

Nancy R. Ihara

Estlow, Trevor

From: Michelle Baggett [redacted]
Sent: Tuesday, September 14, 2021 6:42 PM
To: Estlow, Trevor
Subject: Manila Bike Path…

Trevor Estlow,

I live in Manila on 1916 Lock St. which is located along Rt. 255 and the proposed **Manila Safe Rt. 255 Shared Route Pathway Project # PLN-2021-174-02**. I had heard that the initial Safe Schools Grant written several years ago had expired and that a new grant was being submitted for the continuation of the proposed Bike Path.

I went onto the Planning permit portal and found the Bike Path project on-line, but no actual grant proposal. Could you please let me know if this project is in the grant process yet, and if so, could I please get a copy of that proposal?

I am interested in speaking to whoever will be responsible for the clearing of the buffer between Rt. 255 and my fence line. I spoke to Hank Seaman about the loss of the tree buffer between my fence line and the highway during the last bike path grant process, and he made promises that trees would be planted to mitigate some of my concerns. I am hoping that you will be able to address my concerns in this new grant that is in progress.

I would appreciate it if you could contact me about the resubmitted Bike Path grant, and if you would be able to help me keep a tree buffer between the proposed bike path on Rt. 255 and my fence line.

Thank you,

Michelle Baggett
1916 Lock Street
Manila, CA

[redacted]